

# American Aviation

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## Fortnightly Review

### CAA Speed

IT MAY NOT be too early for a friendly reminder to the Civil Aeronautics Authority that popularity with the aviation industry and its public will depend much upon departmental timing and reasonably speedy action. The thought comes to us as the result of the rather slow moving first hearing on an application for a "grandfather" route certificate covering Pan American's Pacific operations.

Let it suffice to say at this early date that air transport is a fast moving industry, with streamlined operating organizations and equipment, calling for streamlined efficient regulation. CAA hearing and legal action is going to have to demonstrate a new tempo in public administration if it would be popular, and upon popularity depends success in public office.

To do things as well as the Interstate Commerce Commission does them is not going to be good enough in the CAA. Someone must grasp the significance of CAA's job and work out a speed-up system. The time will come when CAA will be snowed under with applications of various sorts and rate briefs, etc. They will cry for more help and there will be no more appropriation for help. Now is a good time to think of that; to evolve a hearing system that will get at the heart of a case without dragging a lot of non-essentials into the record that will slow up action by the Authority members.

In this connection, the published comments about the I.C.C. by Thomas F. Woodlock of *The Wall Street Journal* may be worth reviewing in part:

The simple truth about the task  
(Turn to Page 20)

## CAA Asks Record 35 Million For Next Year's Air Budget

### AERO EXPORT UNIT URGED FOR MFRS.

Taylor Warns of Collapse of Military Exports, Suggests Protective Trade Group

Los, Angeles, Oct. 17—Aircraft manufacturers of the Los Angeles area were warned today that unless serious attention is given to development of a continuing foreign market for airplanes, American manufacturers stand to lose a large share of the export business.

The warning was given by Irving H. Taylor, chief of the automotive-aeronautics trade division of the Bureau of Foreign and Domestic Commerce of the U. S. Department of Commerce, in a talk before 60 representatives of the Southern California airplane industry at a luncheon arranged by the Chamber of Commerce.

"When the European war scare blows over, foreign countries will find themselves with supplies of obsolete military aircraft on hand," Taylor said. "If American airplane manufacturers do not begin to export ships designed for transportation of freight and passengers, they will be left with no foreign trade."

Taylor urged the manufacturers to organize an aeronautical chamber of  
(Turn to Page 2)

### Key to Aviation



DAN BELL

Director of the Budget

Whose "Yes" or "No" on CAA budget requests may mean saving human lives and the success or failure of the CAA.

### P.O. Asks 20 Million For Air Mail; Bureau of Budget Holds Fate of Civil Aviation

THE Civil Aeronautics Authority has submitted to the Bureau of the Budget estimates calling for a \$35,000,000 appropriation for the fiscal year 1940 which begins next July 1. This is a record civil aeronautics budget request almost tripling the request of any single year in the past.

At the same time it also became known unofficially that the Post Office Department has submitted a \$20,000,000 request to the Bureau of the Budget for the 1940 fiscal year, an increase of \$4,500,000 over the current year's appropriation. The increase is to cover compensation for mail on new airlines and a number of feeder lines which will be established if the increased funds are forthcoming.

CAA hearings before the Bureau of the Budget began Thursday, Oct. 27, and were to continue for the better part of the week. During this time the fate of the CAA's expansion plans rests on a series of conferences in which the CAA officials have to put forth their best salesmanship efforts and the Bureau of the Budget attempts to trim the budget requests down in the interests of federal economy. It's a give-and-take grind dreaded by every federal agency and the first of two necessary steps before funds are available. After the Bureau of the Budget approves or disapproves the various budgetary items, the Congressional appropriation committee begins its work and the job of trying to "sell" the request for aviation's funds continues.

### Bell Key Man

But the key man in the United States Government who will decide whether civil aviation has increased funds for airway aids, for research and planning, for proper inspection personnel and regulation, is not any member of the Civil Aeronautics Authority, but Daniel Bell, Director of the Budget. For what the Bureau of the Budget approves and disapproves carries great weight with Congress, and it's up to Congress to vote the funds.

Included in the record \$35,000,000 budget request is a \$15,000,000 item

### Airline Expansion 'War' Flares; Denver Now in Envidable Position

When Robert F. Six, president of Continental Air Lines, announced in Denver Oct. 18 that his company had applied for a permit to inaugurate a Denver to Kansas City service as a connecting link for Transcontinental & Western Air, Inc., between Kansas City and Albuquerque via Denver, members of the Civil Aeronautics Authority shifted uneasily in their chairs.

It is the CAA that must decide what operator will serve Kansas City to Denver with airline service, and while there are other "hot spots" on the airline map (such as Memphis-Houston for which three airlines have applied), the decision on the Kansas City-Denver route bids fair to have far-reaching economic and political reverberations. There are many angles to this particular "battle" not at once evident on the surface.

Ironically enough, the city of Denver, once overlooked by all transcontinental railroads and subsequently passed up by all transcontinental airlines, is now looming as a much-sought air transport center and is in rather an enviable position. Major airlines, now aided by radio beam guidance and more accurate altimeters that conquer the former obstacle of terrain to the west of Denver, are now competing to serve this important city.

United Air Lines, operator of AM 1 from coast to coast, is a serious contender for the Kansas City-Denver route. Last year the P. O. granted permission for United to widen its transcontinental route to include Denver, since the original route passed through Cheyenne, 100 miles to the north. Direct mail service from Omaha  
(Turn to Page 2)

for airway aids to be used over a period of three years as rapidly as the development of the airway program can proceed. The CAA already has a \$2,000,000 appropriation carried over from the last Congress which can be used starting July 1, 1939. The total of \$17,000,000 is designed to bring the airways system to completion, \$10,000,000 being planned for new aids and \$7,000,000 for replacement and modernization of present obsolete aids.

Although the CAA is not permitted to divulge its budget requests, it is also learned unofficially—but reliably—that there is a \$3,000,000 item for airways development in Alaska, a \$3,000,000 item for weather facilities, a \$500,000 item for the Bureau of Economic Regulation, and \$2,000,000 for the private flying and planning division. Last year this latter division had \$269,000. Other specific figures are not known, but the total \$35,000,000 budget request is a super-charged estimate of what it will take to get civil aeronautics in the U. S. moving at high speed.

#### Experts Back Up CAA

If the funds are not forthcoming, it won't be the fault of the CAA. The Authority has called in experts aplenty and has prepared its case for Director of the Budget Bell with great care. Not many in the CAA expect the CAA to receive all it has asked for, but the big question is how much it will receive—and Dan Bell holds the answer.

Strong hopes are being placed on Bell's approval of all requests for funds to aid safety. The Bureau of the Budget is composed of statisticians, accountants, financial experts. Very often in the past when an airplane accident has occurred because of lack of airway aids, the fault has not been with the aviation agency, but with a Bureau of the Budget that does not understand that the elimination of a single item for safety may be the cause of loss of human life and a lush crop of newspaper headlines.

The CAA has placed the cause of human lives directly at the door of the Director of the Budget—to finish once and for all the airway aid system and to provide research facilities, weather reporting equipment and other safety features which the industry and everyone else has wanted for years.

National defense will also play a vital part in budget considerations this year. The Army, particularly, wants the civil airway program completed and Federal Washington is finally coming around to the point of view (which they should have had years ago) that the sound development of civil aviation is a vital part of national defense.

#### Airway Aid Request

How the \$15,000,000 item for airway aids stacks up with previous years can be seen when it is realized that up through 1937 less than \$9,000,000 had been spent on airways. Last year Congress appropriated \$7,000,000, \$2,000,000 of which cannot actually be spent until July 1, 1939.

How the \$35,000,000 total compares with Bureau of Air Commerce appropriations in the past can be seen when it is noted that the current appropriation was for something over \$11,000,000—and this figure even included \$5,000,000 for aids. But the CAA, of course, not only has the old Bureau of Air Mail of the I.C.C. and some Post Office personnel now in its fold, but also has a brand new Air Safety Board.

As for the \$20,000,000 P. O. request for air mail, this will be a record figure also if the Director of the Budget gives his stamp of approval. Highest appropriation for any one year was in 1932 when \$19,938,000 was appropriated. But the figure has been much lower ever since and was as low as \$8,813,000 in 1935. For the current year it is \$15,500,000.

#### Traffic 'Way Up

With revenue passenger miles for September the highest in history, and October expected to be substantially above September, the air carrier industry is beginning to feel optimistic once again. Most amazing increase is shown by American Airlines, with October traffic soaring literally and otherwise. Although all lines have benefitted by the upswing, American's business is the envy of all.

#### Aero Export

(Continued from page 1)

commerce for the sole purpose of studying and developing the export field and emphasized the need for attention to airplanes designed primarily for freight, particularly with regard to Latin America. He offered the services of his bureau in such a move.

The speaker pointed out that a third of America's aircraft production is for export and that half of the profits come from exports, but warned that exports of military airplanes were due to decrease.

#### Edith Lackner Dies

Miss Mary Edith Lackner, of Cincinnati, O., one of the best known women pilots in the country and national secretary of the Ninety-Nines women flying organization, was killed Oct. 29 at Williamstown, W. Va., when her plane crashed and burned. For years she had been recognized as an outstanding promoter of aviation and participated in numerous organizations and activities. She was very popular in flying groups and a mainstay of sportsman flying in Cincinnati.

#### Damon With CAA?

Ralph Damon, vice-president in charge of operations for American Airlines, Inc., may obtain a six months leave of absence from airline work to become temporary deputy administrator of the Civil Aeronautics Authority. At present he is working closely with the CAA as chairman of the industry's operations committee. Strong CAA pressure has been exerted to bring him into the Authority for active duty. The listing of Mr. Damon as deputy administrator on Page 10 of this issue is premature as his appointment has not yet been made. At the time Page 10 went to press it was expected that announcement would be made within a few days but up to Sunday night, Oct. 30, arrangements had yet not been completed.

## CAA Not to O. K. New Lines Without Assurance of Mail From Post Office

The Post Office Department will cooperate with the Civil Aeronautics Authority to the end that certificates of convenience and necessity for new air routes will not be granted by the CAA without the assurance from the Post Office Department that mail will be provided for these new routes, it was indicated by Jesse M. Donaldson, Deputy First Assistant Postmaster General, at the national air mail feeder conference in Kansas City Oct. 7.

In an address before the conference, which impressed listeners with the evident desire of the Post Office Department to cooperate closely in expansion of the air transport system, Mr. Donaldson cleared up one vital point which has caused concern among those desiring to launch new airlines. In a discussion following his address, he remarked pointedly that no certificates would be granted for new air services independent of Post Office approval.

Since no new airline could operate profitably without mail as an essential cargo, there had been some fear that the CAA might grant a certificate for passengers and express without any assurance that the P. O. would contract for mail. According to Mr.

Donaldson's address, the CAA and the P. O. will study applications together and only those certificates will be granted for which mail can be provided.

It was significant that in his remarks Mr. Donaldson suggested that the whole question of subsidy may have to be placed by legislation in the hands of the CAA, similar to the action taken over a year ago in placing all maritime problems, including subsidy, in the hands of the Maritime Commission. This would relieve the Post Office Department of any responsibility for subsidy through mail and appropriations, but would leave the handling of the mail and schedules to this department.

"There must be cooperation between the Post Office Department and the CAA to determine whether a new line will have a practical advantage for air mail," he said.

At the same session, George W. Purcell, of Bloomington, Ill., president of the National Association of Postmasters, read a resolution that had been adopted by his association calling for expansion of airlines and the creation of feeder lines. "I'm sure air mail feeders will get full support of our national association," he said.

#### Airline "War"

(Continued From Page 1)

to Denver was authorized and today United splits its transcontinental service to serve both Cheyenne and Denver. The old Bureau of Air Commerce had no funds to put in the additional airway aid facilities needed between Grand Island and Denver, so United advanced about \$150,000 and did the job to expedite Denver service. In the CAA budget for next year is an item to cover compensation to United for the depreciated value of safety facilities installed in the public interest. There are many in Denver who feel warm to United for its having spent its own money to install airway aids in order to respond to demand for service into Denver.

United wants to include Kansas City-Denver on its coast-to-coast Mainliner service. W. A. Patterson, president, announced the intention to file a week before Bob Six announced that Continental was going after the route with full force. Since United is also applying for a Des Moines-Kansas City route, it is assumed that certain schedules would be routes by way of Chicago-Des Moines-Kansas City-Denver-Salt Lake City.

Bob Six has announced that his company will spend a half million dollars immediately for new equipment if the application is granted favorably to it. Continental is a smaller airline, anxious to expand in numerous directions, but at present has only Lockheed 12 equipment on hand.

Continental's plans are to link in closely with TWA, providing the same type of equipment that TWA now has

in use. If through service is planned from coast to coast by way of Kansas City-Denver-Albuquerque, however, the CAA will have to settle one stickler that has bothered the airline picture for some time. This is the matter of leasing through equipment operating on more than one line. If the CAA should grant permission for through planes to operate on both TWA and Continental, then the CAA would almost have to put the stamp of approval on the sleeper interchange plan which Western Air Express and United Air Lines have tried vainly to get approved by the Post Office Department.

Other speculation about the Continental-United "war" is whether Continental is promoting the first link of a new east-west route to Los Angeles from Kansas City via Denver, Grand Junction, and Las Vegas. Such a Denver-Los Angeles route has long been the dream of some Denver aviation enthusiasts and has been flown experimentally. Its development has also been favored by the Army Air Corps since the Army has important aviation training fields at Rantoul, Ill., and Denver which could more easily be connected with the west coast by an airway through Denver.

Denver has everything to gain, no matter what happens. Left behind for so long in the forward march of transportation, the city is now in the bleachers watching a tug of war between two airline factions, and the CAA faces its first major problem in airway expansion.





## White House Indicates Vast National Defence Program, Many More Aircraft

Air Corps and Navy Flying Units May Be Doubled, Capital Hears, and New Training Program to Build Up Reserve Strength of Mechanics and Pilots Considered

Although there is a scarcity of facts amid a tremendous concentration of guessing and speculation, there seems to be no doubt that high administration leaders, including President Roosevelt, are planning to launch a big building program for the Army and Navy which will probably double the size of the military and Naval air forces.

For several weeks, news stories have been carrying reports of vast national defense plans and most of these have been inspired by the White House. There is plenty of gossip in the air, all obviously intended for a build-up for the next Congress, and the stories relate not only to a large increase in the number of aircraft to be built, but with the training of pilots and mechanics.

At the Air Corps offices there is nothing but bleak official silence. In fact, if one mentions plans for doubling the size of the air force, officials begin a series of Lambeth Walks and eurythmic dances and go to astonishing lengths to deny that anything of the sort is even imagined by dreamers. Maj. Gen. Henry H. "Hap" Arnold, whose talkative nature is one of the bright sides of the Air Corps, seems both pained and shocked at the mention of 1,000 new aircraft, while the press section donned Eucharistic robes for the sacred and solemn rites of official denial, the rites consuming more time than the Sun worshipping of the Aztecs.

It is quite possible that the Air Corps itself has not been in on all of the national defense planning by high administration leaders, but the Air Corps has busied itself during the past six months with detailed surveys of manufacturing possibilities and every manufacturer has been sounded out as to his ability to produce airplanes in quantity.

The old Baker Board figure of 2,320 airplanes for the Air Corps is to be abandoned definitely, according to best reports. Just how high the figure is to be is a matter of pure guess work at present. One newspaper report, written by a well known Washington correspondent "on the inside", states that the U. S. will have 7,000 warplanes, equal to or greater than any foreign nation.

Net result of all the speculation is that the aircraft manufacturing industry should feel very good and that Congress will have in its laps many proposals for national defense. With the White House taking the initiative, it is almost certain that the aircraft strength will be increased substantially. But as the industry knows, it's a long-term program. A thousand new aircraft cannot be built in a few months or even a year.

### NACA Re-elects Ames

Dr. Joseph Ames was re-elected chairman of the National Advisory Committee on Aeronautics at a meeting held in Washington Oct. 20. Dr. Vannevar Bush, president elect of the Carnegie Institution of Washington, was elected vice-chairman. Clinton M. Hester, CAA administrator; Edward J. Noble, CAA chairman, and Dr. Jerome Hunsaker, new members appointed by President Roosevelt on Aug. 17, and Orville Wright attended the meeting, which was described as a review or "stock taking" session.

### More Personnel

Twenty-three inspectors have been added to the field force of the CAA to date and by the end of the fiscal year, June 30, 1939, personnel in the field will have been increased by approximately 300, according to Howard Rough, acting director of the bureau of airways and development. This should be good news to pilots and manufacturers who have complained about the shortage of field personnel.

### SECRET BOMBER BIDS

Air Corps Adopts Navy Policy of Choosing Designs

Dayton, O., Oct. 25—Army Air Corps opened restricted bids at Wright Field today for a secret high altitude attack bomber, out of which may come one or two experimental orders. The bids will not be made public.

Although the Air Corps is under no obligation to buy any ships, this is the first time since Secretary of War Woodring was appointed that bids have been asked on designs rather than on the costly method of submitting actual airplanes for testing. The Navy has followed this policy for some time. The Air Corps gave manufacturers only 40 days to prepare designs and bids, but if any manufacturer is successful in obtaining an experimental contract, he will be paid for the ship or ships. Under the usual Air Corps procedure, unsuccessful contestants for bids are out the money spent on building their entrant ships.

Specifications called for an attack bomber of very high speed at high altitudes. About eight or ten manufacturers were circularized.

## Shades of Justice! The CAA Snubs the Smithsonian, Recognizes Wright Ship

Whether unwittingly or not, the Civil Aeronautics Authority has enlivened the controversy over the Wright plane to an astonishing degree.

With one federal organization (Smithsonian Institution) stubbornly adamant in refusing to give the Wright Brothers credit for making the first heavier-than-air flight in history at Kitty Hawk on Dec. 17, 1903, the CAA, most recent federal agency to be created, has placed a reproduction of the Wright plane on its official seal.

By such action the CAA is likely to endear itself in the hearts of many thousands who firmly believe in the facts that Orville and Wilbur Wright built and flew the first airplane.

Any repercussions in federal Washington are not likely for the reason that the CAA seal does not carry a tag line proclaiming the Wright plane to be the first, but off the record, one government agency has slapped the other rather hard amidst by giving due honor to the Wrights.

As far as can be learned there was no premeditation on the part of the CAA designers of the seal. As John Groves in the information section and Paul J. Frizzell, the secretary, explained in matter-of-fact tones, the CAA had to

## Aviation Calendar

- Nov. 15—Biennial Convention, Air Line Pilots Association, Chicago.
- Nov. 17-18—Symposium of Aeronautical Law, Federal Bar Associations of New York, New Jersey and Connecticut, Room 110, Federal Court House, Foley Square, New York City. (Evenings, 8 p. m.)
- Nov. 25-Dec. 11—16th International Air Show, Paris, France.
- January—Meeting of the Air Transport Association engineering and maintenance committee. City and date tentative.
- Jan. 6-8—Midyear Meeting, Florida Aviation Association and 11th Annual All-American Air Maneuvers, Miami, Fla.
- Jan. 15-17—NAA Annual Convention, St. Louis, Mo.
- Mar. 3-5—Southwest Aviation Conference, Ft. Worth, Tex.
- June 24-July 9—10th Annual National Soaring Contest, Elmira, N. Y.

## Vidal, Putnam Sue

TWA For \$224,500

Wilmington, Del., Oct. 11—A suit involving damages of \$224,500 and costs was filed against Transcontinental & Western Air, Inc., in federal district court today by Eugene Vidal and George Palmer Putnam. It is alleged that TWA failed to carry out an agreement to sell the plaintiffs four Douglas DC2's last year for \$10,000 each, and that the non delivery, preventing the plaintiffs from starting an airline, had caused them to suffer the damage indicated. The market value of the four planes, the bill states, is \$150,000. Vidal formerly headed the Bureau of Air Commerce.

### Air Carnival Booklet

In cooperation with *Southern Flight*, the Tutwiler Hotel of Birmingham and Parks Air College, the City of Birmingham, Ala., has published a booklet describing the 8th Annual National Air Carnival held at Birmingham June 4-5 of this year. The booklet was compiled by Earle Wheeler, publicity manager for Birmingham's Municipal Airport, of which Steadham Acker is director.

## C. R. SMITH AGAIN RINGS ADV. BELL

Full-Page Newspaper Ads Cause Interest With Bold Message on Aviation

In a series of full page advertisements in six daily newspapers, C. R. Smith, president of American Airlines, again took leadership in bold and novel advertising with a signed message entitled, "Today . . . What Is Changing the World More Than Any Other One Thing?" The ads caused considerable comment both inside and outside the industry.

The full page splurge appeared in *The Washington Star* Oct. 24 and was also published in *The New York Times*, the *Boston Herald-Traveler*, the *Detroit Times*, the *Chicago Tribune* and the *Los Angeles Times*.

All over the world, the message said, one word is forcing men to think in new terms. That word is aviation. "To survive ON earth—we must travel ABOVE earth. To ignore this spells decadence. To be slow to utilize it gives the other fellow too many advantages."

"You may believe all of this is true, as applied to governments and military men—but that air transportation is not a necessity for you."

"We submit that air transportation has as much application to you individually, and to your business, as it has to competition among nations. You cannot remain detached and uninfluenced by an economic force which spans the Atlantic in a few hours and makes twin cities of New York and Los Angeles."

"Scientists, engineers and manufacturers are being spurred in the greatest race of all times—the race for supremacy in the air. Nations are getting ready."

"But in air transportation you have nothing to wait for. America has the finest air transport system in the world. Finest in equipment; finest in dependable performance, day and night, every day in the year."

"Today you can join the tens of thousands of others who are enjoying the advantages of air travel."

"Last month American Airlines, Inc., alone carried more than 40,000 passengers. No one can measure the hours of travel-time these people saved—nor, how much business was expedited and productivity increased—nor, how much personal pleasure and comfort was made possible by this modern mode of travel."

Continuing on this theme, the message concluded with: "The new era of aviation is not coming—it is here."

### Pilots Meet Nov. 15

The convention of the Air Line Pilots Association which was scheduled to open in Chicago on Oct. 17, has been postponed to Nov. 15 to give the association's officers more time to lay out a program for the delegates. The last meeting was held Oct. 19, 1936.

### To Seek Record

Columbia, Tenn., Oct. 18—Capt. Frank Frakes today announced plans for smashing world flight endurance records next summer when he expects to take off from Dallas and remain aloft about 1,000 hours, touring the country, being refueled over various cities on his route to New York, where he hopes to land with a new flight mark. His co-pilot has not been named. Financial backers are unannounced, but several national advertisers are said to be interested.



CAA Seal Showing the Wright Plane

have a seal because it was a federal agency and every federal agency has a seal. And what would be more appropriate, they said, than to have a drawing of the first plane? And as for the first plane—well, the Wrights built and flew the first plane, didn't they?

What the Smithsonian Institution thinks about all this probably won't be known. It quietly slumbers away and keeps out of public print, but the CAA has let the world know what it thinks about the whole business.

## NASAO Opposes Proposed Uniform State Air Code; Elects Morris

State Officials Ask CAA to Declare 3,500-Ft. Runway Adequate and Safe; Hear Schnader on Uniform Laws

Omaha, Neb., Oct. 15—Strong opposition to three uniform state laws on aviation liability, airflight and air jurisdiction which are being proposed for adoption by the states, was voiced here today by the National Association of State Aviation Officials when the annual convention unanimously adopted a report prepared by a committee headed by George B. Logan, of St. Louis, general counsel for the association.

The report was adopted after hearing at length William A. Schnader, of Philadelphia, chairman of the committee of Commissioners on Uniform State Laws which has prepared the three aviation laws for the states. Mr. Schnader described the proposals in considerable detail. The proposed uniform codes are opposed by the airlines, private flyers, and now by the state aviation officials.

There seemed to be some feeling that a federal law covering the same general ground would be acceptable.

The NASAO also went on record for a 3,500 foot limitation on runway lengths following a spirited discussion led by Al Near, superintendent of Bowman Field, Louisville, Ky., who opposes long runways. Adoption of the resolution came as a surprise as there was considerable division of opinion, some of the officials favoring mile long runways for safety or at least no attempt at limitation.

The resolution pointed out that the present regulations which govern the landing and take-off characteristics of airplanes as promulgated by the CAA provide that they do not exceed a take-off distance of 1,000 feet, and that they do not exceed landing speeds of 65 to 70 miles per hour; and that since a runway length of 3,500 feet constitutes under these regulations a safety factor of over 200%, that the NASAO go on record as insisting that the regulations be strictly observed for all land aircraft.

The resolution also expressed opposition to provisional gross loading for land airplanes and recommended "that there be a specific declaration by the CAA that runways of 3,500 feet in length, having clear approaches, based on a glide ratio of 20 to 1, constitute an adequate and safe facility for the operation of any type of airplane under standard air conditions."

The convention also asks the CAA to permit a committee of state officials to observe and study the airport report to Congress now in preparation before submission to Congress, and urged the CAA to expand air transportation to reach many sections of the country not now served by scheduled air service.

Among the convention speakers were Mrs. Mabel Walker Willebrandt, chairman of the aeronautical law committee of the American Bar Association; John Victory, of the NACA; and Major A. B. McMullen, chief of the CAA airport section.

Charles L. Morris, state director of aviation for Connecticut, was elected president, succeeding Col. Floyd E. Evans, director of aeronautics for Michigan. First vice-president is Douglas O. Langstaff, director of aeronautics for Louisiana; second vice-president, Dr. Raymond R. Staub, Oregon Board of Aeronautics, Portland, Ore.; third vice-president, Dexter C. Martin, director of the South Carolina Aeronautics Commission.

J. C. Roberts, secretary of the Illinois

Aeronautics Commission, was elected secretary, replacing Howard C. Knotts, editor of the *Journal of Air Law*, who is now an adviser of the CAA in Washington. Mr. George Logan was re-elected general counsel.

Regional vice-presidents are: Major R. C. Copsey, New Jersey Aeronautics Commission; Asa Rountree, Jr., secretary of the Alabama Aeronautics Commission; Sheldon B. Steers, Michigan Board of Aeronautics; William J. Hotz, Nebraska Aeronautics Commission; J. M. Gentry, state aircraft officer, Oklahoma; J. E. Garn, director of the Utah Aeronautics Commission; and Ed M. Bryan, Idaho Aeronautics Commission. About seventy delegates attended the sessions, held in the Hotel Fontenelle. The Nebraska Aeronautics Commission, of which William J. Hotz is chairman, was the host to the association.

## Hester Lauds State Aviation Officials, Seeks Cooperation

Omaha, Neb., Oct. 14—In response to a suggestion that close liaison be established between the National Association of State Aviation Officials and the Civil Aeronautics Authority, Clinton M. Hester, CAA Administrator, told the annual convention of state officials today that he would recommend that the Authority immediately create a new position, the duties of which would be to cooperate with state aviation officials and coordinate state and federal activities.

The suggestion was prompted by Col. Floyd Evans, director of aeronautics for Michigan and retiring national president, who told Mr. Hester that relationships between the state body and the federal aviation body in the Department of Commerce had been anything but satisfactory. Mr. Hester said harmony was not only desirable but essential and indicated he would press for action immediately in the creation of a new post.

In his address the administrator praised highly the efforts of the state aviation officials for federal legislation. "The record of the NASAO is one of the high marks in public service," he said. "Your individual achievements match the collective public record of your organization. It can be said with force that the state aviation officials not only asked for the legislation but were in large measure its architects. The Authority needs and wants your cooperation and I, as its representative, formally invite it."

## Strato Balloon Explodes

The giant balloon which Poland hoped would break the American altitude record was destroyed in an explosion Oct. 14 near Warsaw a few hours before Capt. Bigniew Burzynski and his crew were to ascend. Inflation had been started when a high wind brought about an order to deflate. The blast of ignited hydrogen followed. Maj. Albert W. Stevens, U. S. Army, co-holder of the American record of 79,395-ft., recently arrived in Poland as an observer and aide. Capacity of the bag was said to be 3,300,000-cu. ft.

## Salesman Squier



On his way back to California after consummating a new batch of orders in Europe totaling a million dollars, Carl Squier, vice-president of Lockheed Aircraft Corp., Burbank, is shown as he paused at Chicago Municipal Airport. This trip ran the executive's total air mileage for a year over 100,000. (TWA Photo).

## LAW SYMPOSIUM

Federal Bar Association to Discuss All Phases of Air Law

New York City, Oct. 20—The Federal Bar Association of New York, New Jersey and Connecticut, through its Committee on Aeronautical Law, will conduct a symposium on aeronautical law on the evenings of Nov. 17 and 18 at 8 p.m. in Room 110 of the Federal Court House, Foley Square. Practically the entire field of aeronautical law will be covered, including international law, airspace, damage liability, government control and regulation, aerial aids, tax, insurance and patents.

Speakers will be: Harold Lincoln Brown, Burlingame, Cal.; John C. Cooper, Jr., vice-president of Pan American Airways; Warren Jefferson Davis, Los Angeles; Prof. John A. Eubank, Brooklyn Law School; Prof. James J. Hayden, Catholic University of Washington, D. C.; Howard Osterhout, American delegate at the Hague CITEJA session; Prof. Carl Zollman, Marquette University, Milwaukee, and William M. Wherry, member of the New York bar.

## Sues for \$75,000

Detroit, Mich., Oct. 12—James A. Finfera, Lyons, O., is seeking damages of \$75,000 for injuries received in a crash July 31, 1937, in a suit filed against the City of Detroit and Thomas Brothers Flying Service, at City Airport. Plaintiff alleges he landed at the port just as Roland and Gilbert Thomas, partners in the air service, taxied out to take off. The planes collided and Finfera said he sustained injuries and a cost of \$1,000 in medical fees. The bill named the city as operator of the airport, with Thomas as responsible for the crash. Suit was filed Oct. 5.

## Bramley Gets Hitched

Eric Bramley, news editor of AMERICAN AVIATION, and Miss Vivien Laird, of Des Plaines, Ill., were married in Des Plaines Oct. 5. They came to Washington Oct. 16 after a honeymoon in northern Wisconsin. Both are graduates of Northwestern University, Mr. Bramley having been a student of the Medill School of Journalism and sports editor of *The Daily Northwestern*.

## ROOSEVELT PUSHES CAPITAL AIRPORT

Wants Work Started Now; Cost of Landing Area to Be \$7,000,000

With President Roosevelt insisting upon immediate action, actual work on Washington's new airport at Gravelly Point, one mile south of the present airport, was scheduled to be started at a very early date. The President passed along word to the CAA that he wanted to be present to give the starting signal. Title to the property is being transferred to the CAA.

Meanwhile engineers were preparing detailed plans and it was revealed that the first year's work of constructing the landing area would probably cost around \$7,000,000. No less than 12,000,000 to 15,000,000 cubic yards of earth must be filled in the site and because of the quality of the fill, principally gravel, surfaced runways will be constructed shortly after the fill is completed.

The landing area is to be completed within a year and the entire airport completed with buildings in two years. Three runways will be 4,500 feet, one 4,000 and these extended later to a mile in length.

No plans are being made for buildings at present, although construction of a large hangar may start early in the spring. Provision will be made for dual runways, although only one set will be constructed now. The only other airport designed for dual runways is Chicago. For the completed airport, with buildings, the cost will probably reach \$15,000,000.

## Off-Line Airports Called Major Problem

Omaha, Neb., Oct. 15—Off-line airports serving private and itinerant flyers exclusively constitute the major problem in aviation today, Robert Aldrich, manager of Troy Airport, Troy, N. Y., told the National Association of State Aviation Officials here today. "In a great many cases it is not a question of whether the runways shall be 3,000 or 4,000 feet long," he said, "but whether there will continue to be any airport in this or that locality at all."

Asserting that the private flyer lacks a voice to speak for him, Aldrich urged the state aviation officials to take the leadership in promoting and protecting the interests of this branch of aviation.

"Without airports, airplanes are practically useless. We now have a total of 830 publicly-owned airports in the U. S., of which about 270 are air transport on-line airports. This leaves about 560 airports now depending solely on the private flyer for any sort of revenue at all. Many of these have airline and feeder line hopes, but naturally all of these hopes cannot be fulfilled. This puts the off-line airport in the majority and being in the majority I would say they constitute a major problem. None of them should be permitted to shut down—in fact their number must be increased."

## J. S. Collins Leaves C.A.A.

John S. Collins, former head of the administrative section, Bureau of Air Commerce, has left the Civil Aeronautics Authority, where he was serving as chief of the office service division, to accept a position as administrative assistant in the Bureau of Foreign and Domestic Commerce. Clayton Estep has taken Collins' place with C.A.A.



## Plane Shortage a Major Problem Facing U. S. Aviation Experts

How to Make More Ships Available to Present Holders of Pilots' Licenses and Win New Converts Causing Concern, Airmen Agree

One of the challenging problems facing American aeronautics today is the shortage of planes. Civil Aeronautics Authority figures reveal the disproportionate relation between the number of pilot certificates and certificated aircraft. There are approximately 40,000 student pilot certificates active today. There are more than 21,000 pilot certificates active. Yet certificated aircraft number 10,836 civil and 3,500 military.

"It is obvious that many of these would-be flyers, both pilots and student pilots, are going to be denied many chances at the controls," a well known aviation figure was bemoaning to Washington listeners last week. "And the situation is not improving. This gap between the number of pilots and potential pilots and the number of aircraft available for them to fly is something to conjure with. Availability of planes means everything to aviation. If a ship and pilot-instructor were placed on every small airport in the country tomorrow the number of passengers, and air enthusiasts, would skyrocket overnight. But if the prospective flyer has to drive from 20 to 100 miles to find a plane, he'll decide it isn't worth the trouble. Planes must be available nearby when the mood strikes—or aviation loses out."

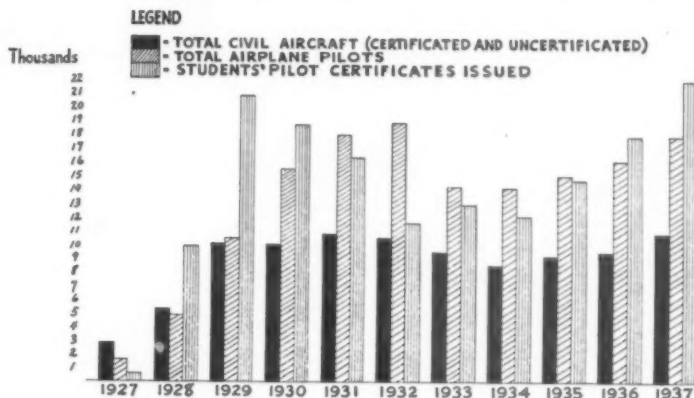
It is obvious that young men who are eager to adopt aviation as a career, and who are keen to get into the actual flying end of the industry, are doomed to discouragement. It is also obvious

that it is not possible under the present set-up of the industry to manufacture sufficient planes which the financial capabilities of the student pilots will permit them to absorb.

Inquiry into possible solutions to the problem reveals that of any given number of students who enroll for a flight course, whether it be for a private or transport certificate, some 10% drop out for financial reasons, about 30% continue their flying on a reduced schedule of hours for the same reason, and the remaining 60% go on to various ratings of certificates.

Ray Wilson, manager of the Park Hill Airport at Denver, Col., says that some 50% of their student list constitutes potential plane owners "but who probably will not own a plane for several years because of their inability to finance the present day cost of aircraft". He also says that a small percentage, probably 10%, are buying planes immediately on completion of their training. Mr. Wilson believes that the main obstacle in the way of private ownership is the expense of operation, not only the first cost of an airplane safe to operate under varying conditions, but the continuing cost of maintenance, hangar rental, labor costs and the like. He sums up his study of the problem by concluding that a mass production of one or more types of aircraft engines and other accessories, thereby reducing costs considerably, will do more to bring about increased private flying than any other one factor.

CIVIL AIRCRAFT, PILOTS, STUDENT CERTIFICATES, 1927-1937



One of the larger flying schools reports that practically all of its graduates are continuing their flying in some form or another, with the majority of transport graduates buying their own planes and returning to their homes to engage in commercial operation. But here again the financial abilities of the students play the most important part in the purchase of planes.

If the present increase in the number of pilots continues, it is certain that unless the manufacture of airplanes picks up, the situation will become acute before many more years pass. Obsolescence and crashes each year remove a number of the available aircraft from the picture and in spite of the fact that the small planes are to be produced in constantly increasing numbers, the difference between the total number of pilots and the total number of airplanes available for them

to fly is still causing consternation to those who are seeking to make flying the simple, inexpensive sport it could be.

### Fined for Overloading

Lewistown, Pa., Oct. 13—Keith G. Cantine, Detroit, pleaded guilty before Justice of the Peace Oscar F. Brush here of having overloaded his plane while hauling passengers. He paid a fine and costs of \$154. Cantine, who had been flying a tri-motored barnstorming craft, was arrested by Arthur S. Huntington, inspector for the state Bureau of Aeronautics.

### Fuller Incident

Denver, Oct. 15—Frank Fuller's speedy Seversky ground looped tonight as the racing pilot was taking off at Denver airport for San Francisco. Attendants said the tail wheel locked.

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## FIXED OPERATORS EXEMPTED BY CAA

All Non-Scheduled Aviation Exempted From Filing for Certificates of Convenience and Necessity

Non-scheduled operators of aircraft were exempted Oct. 19 by the CAA from the requirements for securing certificates of convenience and necessity.

The exemption removed all doubt as to the legality of operations by non-scheduled operators after Oct. 21, the last day for filing of applications for certificates of convenience and necessity.

A number of fixed base operators applied for certificates before the closing date and thus protected any rights or interests they might have under the "grandfather clause" entitling them to protection of their rights under the law.

But those who did not apply for certificates have every right to continue operating until such time as the CAA may prescribe certain regulations.

"If any non-scheduled operator considers himself to be a 'common carrier for compensation or hire' or is engaged in the carrying of mail by aircraft and thinks he has 'grandfather' rights under the Act, such 'grandfather' rights can be protected only by the filing with the Authority of an application for a certificate of public convenience and necessity on or before Oct. 21, 1938," the announcement said.

In view of the fact that fixed base operators were not informed as to their status until two days before the closing date for filing, however, those who did not file will probably be protected in their rights. At any rate the CAA will study the non-scheduled situation for later action.

## Fixed Base Operators Push Broad Program

Los Angeles, Oct. 7.—C. F. Lienesch, president of Non-Scheduled Aviation, Inc., has announced a broad program on behalf of the group of fixed base operators comprising this organization. Committees have been assigned to study the following projects:

Development of a code of fair practices for aircraft operators.

Preparation of a used aircraft Blue Book.

Development of an inter-operator scrip plan to encourage block selling of time to plane renters.

Preparation of a protest against enactment of a national uniform air insurance law which would impose hardships on operators of non-scheduled aircraft.

Preparation of a protest to the CAA against the recent requirement that non-scheduled operators must obtain certificates of convenience and necessity just as is required of airline operators.

Development of a plan to bring about better enforcement of existing regulations.

Members are receiving regular bulletins concerning progress on these projects. A plan is also under active consideration at this time concerning development of a cooperative sales campaign to reach the general public with an appeal to patronize all accredited aircraft operators in the area.

### Papana Cancels Flight

Miami, Fla., Oct. 18.—Capt. Alex Papana of the Rumanian air force today gave up plans for a flight to Rumania. He and Max Constant, Hollywood, escaped injury yesterday when their plane ground looped on a takeoff. It was the third crash encountered during preparations for the flight.

## NON-SCHEDULED Aviation

### Aero Groups

Boston, Mass.—Gov. Hurley on Oct. 6 appointed three new members to a special commission to study advisability of the state assuming control of East Boston Airport: Lieut. Alfred Magaletta, Westwood; Daniel K. Eldridge, 1399 Commonwealth Ave., and Lieut. Col. Louis E. Boutwell, Malden. Other members are Sen. James A. Gunn of Turner's Falls; Reps. Enrico Cappucci of East Boston, Russell P. Brown of Beverly, and John W. Lasell of Northbridge. Eldridge is the Boston Police Department's unofficial greeter at Boston Airport.

Oil City, Pa. The Aero Club will cooperate with the extension division of Pennsylvania State College in organizing courses in airplane motors and the theory of flight. The following members have been nominated as directors: John L. King, W. J. Brundred, James Borland, L. H. Gavin, Henry Spiegelman, H. Douglas Brown, Jr., Richard M. Lobaugh.

Tulsa, Okla.—Tulsa unit of the Women's National Aeronautic Association has elected the following executive board to collect funds for the Amelia Earhart Foundation, main project of the unit this fall: Mrs. Rollin Gish, club president; Mrs. Gordon L. Wright, Mrs. Willis C. Brown, Mrs. Waldo D. Emery, Mrs. John Wallace, Mrs. H. C. Duncan.

Pittsburgh, Pa.—Pittsburgh Aero Club, which claimed to be the first of its kind chartered in this country, has re-elected Clifford Ball as president; Robert H. Hancock, Edison Spear and Ray Tucker are vice presidents; and the following are directors: Louis Barry, Barney Mulvihill, Al Littenberger, John Norwood Rodgers, William Graham. John J. Allen was re-elected secretary and Edward Kitzmiller, treasurer. The club was organized 20 years ago.

Athens, Ga.—Manning Tripp, Eastman, Ga., student, is organizing a flying club at the University of Georgia.

New Orleans, La.—The aeronautics committee of the Young Men's Business Club is pushing establishment here of a seaplane base for passenger traffic to Latin America. Arthur Hill, club member, said cost would be between \$1,500,000 and \$2,000,000.

### Lightplane Endurance Record of About 130 Hours Reported

Richmond, Ind., Oct. 17.—Bob McDaniels and Russ Morris, local flyers, set their plane down shortly after 5 p. m. today after breaking the unofficial endurance record for lightplanes of 106 hours, 6 minutes, by about 24 hours. The previous mark was set by Merrill Phoenix and Harold Allen who landed Sept. 7 at Syracuse, N. Y. McDaniels and Morris refueled here three times a day and at Vandalia, O., airport each midnight, taking up food and tins of gasoline on a rope. It was the flyers' fourth attempt. Unofficial elapsed time was reported as 130 hours. An unsuccessful endurance attempt was made by Russ Finefrock and W. B. McCullough at Tyler, Tex.

### Brayton Wins Prizes



C. C. Brayton, Aeronca representative and operator of Brayton Air Services, Oakland, Cal., won no less than three first prizes in his Continental-powered Aeronca 50 "Chief" at an all lightplane meet held in September at Monterey, Cal. A crowd of 5,000 witnessed the races and some 79 pilots and their passengers flew to the meet in lightplanes. Brayton won the four-lap closed course race, the 50-hp. free-for-all, and the cross-country race from Watsonville to Monterey. Charles Cornwell, of Oakland, also flying an Aeronca 50, took second place in the cross-country. Eleven lightplanes were entered.

### Shows & Tours

Shreveport, La.—Barksdale Field flyers announce that the annual charity air show will not be held this year due to recent Army orders curtailing Air Corps demonstration activities.

Salt Lake City.—Nine planes carrying 23 persons left here Oct. 8 on a good will flight to Ely, Nev. Clinton Seal, president of the newly formed Utah Pilots' Association, led the group, with Arthur Nichols assisting. The occasion was dedication of the Ely airport. The association and the local chamber of commerce sponsored the project.

Memphis, Tenn.—The \$140,000 municipal airport administration building was dedicated here Oct. 15, and about 20,000 persons attended the air show held as part of the ceremonies. Participants were Maj. Al Williams, R. D. Foreman, Mike Stehle, Charles Wright, Charles Pugh, Navy Sowell. Maj. Williams said only one European airport (in Holland) could compare with the local terminal. W. Percy McDonald, West Tennessee member of the Tennessee Aeronautical Commission, presided at the ceremonies. G. D. Albrecht is port manager. American Airlines and Chicago & Southern escorted visitors through airliners on display.

Knoxville, Tenn.—Officials of the local American Legion chapter have announced that more than \$3,000 was realized, after expenses, from the All East Tennessee Air Show held recently. A donation of \$875 will be made to charity.

## Low Insurance Rate Announced By Beech

As announced in the full page advertisement in the Oct. 15 issue of AMERICAN AVIATION, the Beech Aircraft Corp., of Wichita, Kan., has arranged for Aero Insurance Underwriters to offer to purchasers of new Beechcraft biplanes full hull insurance coverage, including crash, fire, windstorm, tornado and cyclone, land damage, collision, hail and theft, at an overall rate of 9.75%.

This unprecedented low rate will be available to private owners whose experience and record are acceptable to the underwriters, and is based partly on two years of shop observation on overhaul and repair costs.

This full repair and replacement coverage at the special rate has been brought about because of a reciprocal working agreement under which the Beech Aircraft Corp. supports its confidence in its product by cooperating with Aero Insurance Underwriters.

"I hope this new and unique rate will eliminate once and for all the former very speculative practice of owners carrying their own insurance," Walter Beech, president, said, "because of a natural reluctance to pay the former rates. We have done everything in our power to cooperate with the underwriters to make this coverage and rate available to our own owners, but, looking further, we see a benefit in the future to the whole aviation industry."

Springfield, Mass.—Irving D. Marshall, 194 Dwight Road, has been elected chairman of the aviation council of the American Legion for this vicinity. The group, organized Sept. 15, will act as a clearing house for aviation speakers for clubs, schools, and local radio programs. Other members include Julius Meltzer, Ralph Warriner, Roland Fitzroy, and David Grimshaw.

Chicago, Ill.—Miss Mary Sim has been elected president of the Chicago Girls' Flying Club. Members participated in an air show held at Lansing Airport recently.

Detroit, Mich.—Jeanette Lempke, Saginaw business woman, won over nine other feminine contestants in the 5th annual Michigan Women's Air Meet held at Hartung Airport recently. Flying a Davis biplane, she led in two of the four scheduled events. Runners up were Helen Montgomery, of Triangle Airport, Plymouth; Faye Davies Kirk, 14940 Westwood Ave.; Doris Lowery of Pontiac, who won at last year's meet; Alice Hirschmann Hammond, Grosse Pointe Farms; Pauline Hutchins, Pontiac; Marion Jane Weyant, Lansing. Others who competed were Leora Stroup, Sandra Goralczyk, of 2342 Edwin Ave., Hamtramck, and Eloise May Smith, Kalamazoo.

Nashville, Tenn.—A crowd of about 25,000 persons watched a two-hour air show at municipal airport Oct. 9 sponsored by the 105th Observation Squadron, Tennessee National Guard, headed by Maj. Walter Williams. Hugh Thomasson was director. Proceeds will be used to equip the squadron's new buildings at the airport. On the program were Don Walters, Capt. Dick Granere, Harold Johnson, Clarence MacArthur, Buddy Batzel.

Philadelphia, Pa.—The Pylon Club has enrolled about 65 flyers in its membership, John H. Witherow, president, announces. Mail to the club may be addressed in care of John O. Harte, of the Philadelphia Bulletin.



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# TEXACO

## Aviation

### FUEL AND LUBRICANTS

# Wanted: Fewer Rules, More Airports

Manufacturers of Private-Owner Airplanes Answer the Question, "What Can the CAA Do to Aid Private Flying?" with Concrete Proposals; One Favors Subsidy Plan

**W**HAT can the Civil Aeronautics Authority do to aid private flying? This question was asked of a number of manufacturers of private-owner aircraft because the new Authority recently appointed Grove Webster chief of a new private flying section and has launched a broad program of private flying studies and activities.

Is subsidy desirable? Are there too many regulations? These and many other questions enter into the symposium. Replies from the manufacturers indicate that if there is one factor on which a majority agree, it is that regulations should be simplified. Development of small airports is next in prominence and from that point on there is little unanimity of opinion of what can be done. One manufacturer favors subsidy, another opposes.

All of the manufacturers evidently wholeheartedly approve of the attention the CAA has given so far to private flying.

"We are glad to learn that the CAA is beginning to think of private flying," writes W. T. Piper, president of Piper Aircraft Corp., largest manufacturer of light planes in the country. "Whether it is true or not, there seems to be a strong feeling among the private flyers and operators of small fields that the regulations are being framed largely for the benefit of the commercial interests."

"The Civil Aeronautics Authority has a big task ahead of it and it can best be accomplished by the wholehearted cooperation of all of us," said D. C. Flower, of the Waco Aircraft Co. "Let's play ball with them."

From E. E. Porterfield, Jr., president of Porterfield Aircraft Corp., Kansas City, Mo., came the comment that "certainly something like this is necessary for the industry."

For the sake of convenience, the suggestions and comments have been classified under several general headings.

## Regulations

From Carl de Ganahl, president of Fleetwings, Inc.:

"The only remark that I can make in regard to what the CAA can do for private flying would be that they do as little as possible.

"The present tendency of the federal government is to create as many bureaus as possible with as many people as possible and these people are turning out as many regulations and voluminous instructions as they can in order to justify their positions. As an example I have just received a book from the CAA 8 by 11 inches and one inch thick, which I understand I am supposed to read in order to pilot an airplane from here to New York.

"I consider most of this nonsense, and feel that the CAA can be most helpful to private flying by eliminating a lot of regulations and simplifying the subject instead of complicating it.

"The reaction of an individual becoming interested in flying and deciding whether he will take up piloting and purchase a plane for his personal use is immediately impressed with the terrific burden of voluminous instructions and other stuff which he is supposed to know. It is frighten-

ing and I am afraid leaves the impression that flying is an art which should be left to trained engineers and a few very daring individuals. This is not the attitude which will do flying any good and I would suggest that the CAA bear this in mind."

From a manufacturer who asked that his name be omitted:

"We believe that the majority of the regulations as now in effect are reasonable as far as piloting rules are concerned. Modifications made since the new rules became effective have eliminated some of the objectionable points. Probably others will contribute a large number of ideas toward this subject."

From W. T. Piper, president of Piper Aircraft Corp.:

"In talking with many of our dealers, I have learned that they feel that we have altogether too much regulation and that everything possible to simplify the regulations should be done. Personally, I have always felt that a minimum of government, and also of regulation, is desirable, and that in this age of regulation and regimentation it is necessary to be careful or these things will be badly over-done.

"I believe a study of the majority of airplane accidents will show that they are caused because the pilot has not used just plain ordinary horse sense. So far as I know, no examinations given show whether the pilot possesses this quality, nor do any of the regulations help him to have it when he needs it the most. When people live in harmony, a certain amount of regulations, rules and law are necessary, but we have all been convinced that, generally speaking, the less we have the better, and I think this applies to aviation as well as life in general. So, let's have as little regulation as we can get along with and let the industry grow normally instead of trying to develop it by forced feeding."

From D. C. Flower of Waco Aircraft Co. came a concrete suggestion regarding flying regulations:

"Let's allot the air up to 1,000 or 1,500 feet above the ground surface to the itinerant flyers in simple language so they will know they are always completely free to use that layer regardless of what some weather man may be reporting as to visibility and ceiling. Understand, we don't want to encourage bad weather flying in any sense of the word and the itinerant flyer should be strictly limited to contact flying unless properly equipped and rated for instrument work, but we believe it should be left to the pilot's good judgment as to when he should fly and when he shouldn't, and that the present system does more harm than good from the standpoint of safe operation of planes by the itinerant flyer.

"We should simplify the requirements for the various classes of licenses at least up to scheduled airline and instrument rating examinations. There seems to have been a tendency recently to make the examinations difficult, put in more catch questions and make correct information harder to get. These requirements should be simplified to a minimum and then a small pamphlet put out that will contain all the information a man needs to have on all the subjects required

to take a commercial pilot's license. At present, it is difficult to know what to study or how much."

Mr. Flower also brought up the question of costly red tape in meeting certain requirements and mentioned specifically the following: "In the last few months it seems that half the airplanes coming up for relicensing were required to submit an individual weight and balance diagram for that particular plane with the equipment it had on in order to get the license renewed. Now, in most cases there was really no legitimate doubt about the eligibility of the plane for license but, in order to satisfy the red tape requirements, a lot of private owners spent a lot of good time, money and mental anguish meeting requirements."

Another manufacturer who did not wish his name published said:

"We have found that the CAA has been giving more cooperation to us in some ways and in other ways has tightened their restrictions in a manner that hampers our efforts. We believe that they have become over-cautious in granting approval of small changes in equipment. As you no doubt realize, private owners like to purchase airplanes which to a certain extent express their individuality and a good many of them like some special little gadget installed. The CAA is carrying the regulation over such small changes to a rather far-fetched degree and it is almost impossible to make any sort of change, except in the color of the rug, without making a new stress analysis and submitting drawings for the approval of the CAA. We believe that this extra regulation hampers our business and we know that it costs us a considerable amount of money."

## Policy

From D. C. Flower of Waco Aircraft:

"Educate the personnel of the CAA starting in Washington and going out to the remote field man that the purpose of the Authority is to stimulate, aid and promote flying in all of its forms. It is so easy for any organization, and especially a government authority of this sort, to become increasingly autocratic that continual emphasis on this point with occasional new slogans to drive home this general principle is important."

## Subsidy

From E. E. Porterfield, Jr.:

"The greatest thing the CAA could do for private flying would be a subsidy, something along the lines of the plan the British Government has recently adopted, to teach young fellows not yet of military age to fly light planes with a view to making many of them military pilots later.

Many non-profit organizations and others are today attempting this, but are unable to proceed with their patriotic ideas because of lack of capital. A subsidy along this line seems to be what the U. S. needs to increase private flying.

"The most recent figures published show that there are more than 40,000 active student flying permits in the U. S. The sad part of that is that so many of them are out of employment

and others have become too conservative to spend their money for flying because so many of their buddies are out of work. This seems to be true enough to prevent operators from buying airplanes for student instruction in the quantities they did during 1936 and the first half of 1937.

"Experimental aid on the part of the government to manufacturers is most desirable, because the manufacturers of light airplanes for private flying cannot, under the present regulations, operate on profitable basis and still develop new models. A subsidy of flying clubs or individual pilots, in which the government would pay the major portion of flying instruction expense, would be most welcome to individual flying students, flying clubs, and those who are manufacturing light airplanes for student instruction.

"The United States is not going to hold its present position in air defense unless it keeps pace with other nations along these lines. To what better purpose could the government spend money, than to adopt a subsidy to make thousands of young pilots? Wouldn't it be better than the CCC or the WPA? The writer's theory is that if a small part of the WPA money could be loaned to manufacturers to finance direct and indirect employment, the government would have a chance to get its money back, where there seems to be no such possibility under WPA or CCC. In the meantime something worthwhile could be accomplished in the way of creating a splendid and an enormous National Air Defense program.

"Two bills were introduced in Congress about four years ago. One of them was to authorize the government to pay a majority of the price of a flying course for eligible young men and women. The other was to authorize the government to pay the majority of the cost of light airplanes selling under certain prices. Both bills were killed for lack of concerted support. Revival and passage of such bills would put our country in a most enviable position from a standpoint of national air defense."

From W. T. Piper:

"I am opposed to any plan for subsidy of flying clubs or individual pilots. In the past few years we have developed a very large number of 'Gimmies' and I feel that it is desirable for flying to stand as far as possible on its own feet. Any government aid which would increase private flying today would have to be perpetual or the result would be an over-production of planes and pilots when the subsidy was discontinued.

"In regard to experimental aid to manufacturers, I also feel that this is not, in any way, necessary. I can see no more reason why airplane manufacturers should be helped to develop their product than the manufacturers of any other article."

From a manufacturer who wishes to remain anonymous:

"We do not believe the subsidy plan would work in the United States. If a subsidy were obtained, we are certain that with the subsidy would come government regulations which in time would cause more regulation rather than less, and eventually would wind up by hampering the industry. In our opinion, the American plan of develop-



ment by free initiative is the best, providing that the government does not offer too much interference."

## Airports

From W. T. Piper:

"A government should do those things for individuals which they cannot do for themselves. Cities, counties, states and the federal government all combine to give us a very expensive and complete highway system and it is just as much their duty to furnish the rivers of the country airports as it is to furnish roads for automobiles. One of the chief reasons for the slow growth of aviation is that one is generally compelled to sit down on a field which is far removed from the point which he wishes to reach. Both safety and utility would be immensely increased by more small airports, with the resultant growth of private flying. Since flying is a long distance method of transportation, the airports should be linked closely to some short trip transportation, and for that reason, the small taxi-strips along the highways appeal greatly to me."

From a manufacturer who wishes to be anonymous:

"With regard to airports we believe that of course it would be valuable to have more small fields made available so that airplanes could reach a greater percentage of the small towns. Perhaps the CAA could work in collaboration with the Department of Agriculture so that certain selected fields which are withdrawn from farm production purposes under the Agricultural Adjustment Administration could be planted with grass and marked as temporary airports. The government is paying for the withdrawal of a great deal of acreage, and since they pay for it while it is lying idle they certainly should be able to have some voice in its disposal. They might even go so far as to pay the farmer a very nominal fee for the extra trouble required to maintain fences around such a field and keep it free of cattle so that airplanes could land there without risk of damage."

"No special preparation would be necessary except to level the furrows generally and plant some sort of cover crop which would keep the field from getting soggy when wet weather occurred. In order to be usable, of course, such fields should be marked and the government should provide pilots with a directory showing their location. Probably the number of such fields should be at least equal to the number of present-day fields available, and yet the expense would be practically nominal."

From D. C. Flower, Waco Aircraft: "The Authority should certainly stimulate airport construction but we believe it is equally important that this stimulation by the Authority be largely confined to a large number of what might be called Grade B, or small town airports, with the realization that when the activity at any certain point becomes sufficiently heavy to warrant the large expenditure for a Grade A port, there will be sufficient local need and initiative to provide the necessary improvements whereas federal assistance is needed in starting activity in order to develop the business. We believe this should be worked out on a basis providing that the field and maintenance of that field is the definite responsibility of the government, the same as the provision of highways and their maintenance, so the individual operator isn't loaded down with the overhead of maintaining the airport."

"Then, we believe the Authority should have definite recommendations

## The 26th Mackay Trophy Award



Secretary of War Henry H. Woodring on Oct. 14 presented the noted Mackay Trophy to Captains Carl J. Crane and George V. Holloman of the U. S. Army Air Corps for the development of the original automatic landing device for aircraft which Mr. Woodring described as "a history-making stride." In above photo are, left to right, Major General H. H. Arnold, Chief of the Air Corps, Capt. Crane, Capt. Holloman, and Mr. Raymond Stout, engineer, who co-operated in the development. It is noteworthy that 26 years ago the first award of the Mackay Trophy was made to the then infantryman, General Arnold, for a reconnaissance flight from College Park, Md., to Fort Myer, Va., and return in a 41-minute flight in a ship powered with a 40-hp. engine—a monumental achievement for the time. (War Dept. photo).

worked out for improvements to be made by an operator that will permit his operation on a business basis. Through some of the other government agencies financing can undoubtedly be worked out where the funds would become available for the erection of a hangar and other improvements to be paid for on a long term basis, similar to the house financing which has been worked out by the government.

"We believe that plan should incorporate in the original layout such things as a restaurant concession, maybe to be operated as a roof garden with dance floor, etc. Usually on an airport there is ample space for recreational activities such as tennis courts, and, if possible, a swimming pool. In other words, in these small towns if the airport could be made the recreational center it would have an untold value in advertising and education as well as providing side line concessions which would provide a satisfactory revenue for the operator."

## Production

From an anonymous manufacturer: "The CAA could aid the manufacturers of private aircraft by exerting whatever influence they may have in Washington to aid the commercial manufacturers in obtaining an exemption from the minimum wage provisions of the Walsh-Healey Act. The various government departments purchase 'off the shelf' airplanes from most of the commercial manufacturers. If it is necessary for these manufacturers to pay the minimum wages under the provisions of the Walsh-Healey Act whenever they make an airplane for the government it will be very difficult for such manufacturers to maintain the prevalent wage scales now paid. Obviously, you cannot pay a man a minimum of 60c an hour for a period of a month while the factory is working on a government airplane and then reduce his pay at the end of that period. If the provisions of this Act are inflicted upon the small commercial manufacturers, they will be put in a position of either having to refuse government business or of generally raising their wage scale to the minimum as pro-

### Golden State Ingenuity

Red Bluff, Cal., Oct. 13—Walter A. Hornbeck, president of the chamber of commerce, has called for at least 100 motorists who will volunteer to drive up and down the newly oiled runway at municipal airport for about 30 minutes two or three evenings soon in order to pack down the surface. After the civic "rolleree" is over, Hornbeck will select about 10 of the volunteers to be given free airplane rides.

Rochester, N. Y.—Arthur Lohman has been named president of Rochester Pilots Association succeeding Lieut. Otto Enderton, who resigned when he left the city to join the staff of the CAA. Egbert Delano is secretary. Lieut. Comdr. Russell Holderman was elected to the board of directors to replace Lohman.

Wichita, Kan.—Charles W. Theal, Texas Oil Co. representative, was elected president of the Wichita Aviation Club to succeed Orville Sheffer, resigned. Position of vice-president, left vacant by resignation of Don Dobbey, TWA representative who was transferred, was not filled.

Syracuse, N. Y.—Edward J. Whalen on Oct. 12 was elected president of Syracuse Aeronautic Association, succeeding Herman A. Ecker. C. H. Bennum is vice-president, G. L. Williams is secretary, Robert J. Lewis is treasurer. The group was founded in 1935 by a group led by R. L. Kincaid.

Cheyenne, Wyo.—G. G. Brooder, of Lander, Wyo., has been appointed head of the Wyoming American Legion aeronautics committee and will serve as a state executive committeeman.

W. S. Bumball, Irvington, N. J., has replaced Frank Melville as head of the Eastern Flying Club.

## THE NEW WELCH AIRPLANE

Will soon be in production—powered with a 50 H. P. Motor—and will be equipped (beside standard equipment) with . . .

Shockstruts

Brakes

Navigation Lights

Compass

Two complete control

wheels

Steerable tail wheel

Large roomy completely

upholstered cabin

Two color sanded and

rubbed paint job

Sells for ONLY \$1396. One-third down—balance financed



### WELCH STANDARD MODELS

\$996. One-third down—balance financed.

### PILOTS WANTED

Commercial or private pilots who can demonstrate airplanes and organize groups of NATIONAL FLYING SQUADRONS whose members get 10 hours of dual instructions and 40 hours of solo flying for ONLY \$3.60 per hour—including instructions in airplane mechanics and ground instructions. Pilots' income \$7500.00 per year. \$500.00 investment required on demonstrator.

### YOUNG MEN WANTED

We need a few good young men to work out a 200 hour commercial flying course so they can qualify for instructors and licensed mechanics.

## WELCH AIRPLANES

1720 Mishawaka Avenue, South Bend, Indiana

## CAA Organization Plan Completed; Private Flying Status is Boosted

Administrator in Key Position With All Bureaus and Divisions Under Him; 3 Bureaus Created to Consolidate Organization

The Civil Aeronautics Authority on Oct. 22 released its organization chart and on Oct. 24 held its first meeting under this plan.

Notable features of the organization are (1) the manner by which the administrator becomes the key official of the Authority, being the liaison between the members and the various bureaus and divisions, (2) the creation of three bureaus to replace the former system of divisions in the Bureau of Air Commerce and (3) the raising of the status of private flying to a division with the formation of the division of private flying and planning. Previously, private flying had been a section within a division.

Appointment of Ralph S. Damon, vice-president of operations for American Airlines, as deputy administrator for six months, was highly regarded in Washington as a sound and constructive move.

For the benefit of the industry, the following list of personnel has been prepared which can be used in conjunction with the organization chart published on this page.

### Civil Aeronautics Authority

#### The Authority

Edward J. Noble, Chairman; Harlee Branch, Vice-Chairman; Oswald Ryan, Robert Hinkley and G. Grant Mason.

#### Administrator

Clinton M. Hester

#### Deputy Administrator

Ralph S. Damon

#### Coordinator and Secretary

Paul J. Frizzell

Planning and procedure division: J. C. Sinnegan, Chief

Budget and finance division: A. J. Naylor, Chief

Personnel division: Vacant

Office service division: C. M. Estep, Chief

Records division: R. R. Reining, Chief

#### General Counsel

Charles Stuart Guthrie

Legal adviser on economic regulation: L. W. Pogue

Legal adviser on administration, safety and enforcement: Vacant

Director of Liaison and Information: C. B. Allen (temporary)

Bureau of Airways and Development: Howard F. Rough, Acting Director

Airways Engineering division: Charles Stanton, Chief

Airways operation division: Earl Ward, Chief

Private flying and planning division: R. C. Gazley, Chief

Bureau of Safety Regulation and Information: B. M. Jacobs, Acting Director

Publications and Statistics division: Floyd Brinkley (Acting Chief)

Certificate and inspection division: R. S. Boutelle, Chief

Regulation and Enforcement division: George Vest, Chief

#### Technical Assistant

Elwood Cole

#### Bureau of Economic Regulation

Norman B. Haley, Acting Director

Formal proceedings and compliance division: Vacant

Accounts and reports division: Vacant

Rates and tariffs division: Vacant

International division: Samuel E. Gates, Chief

#### Air Safety Board

Col. W. Sumpter Smith and Thomas O. Hardin. Third member not yet appointed by President

Legal adviser: Darrell T. Lane

Executive officer: William S. McDuffee

Technical adviser: Vacant

Investigation division: Vacant

Information and publication division: Vacant

Recommendations division: Vacant

Regional offices: not designated.

This is the first federal regulatory agency created whereby the quasi-judicial functions are separated from the administrative functions. Members of the CAA are relieved of administrative duties, these being taken care of by the administrator.

As provided in the Act, the Air Safety Board is an independent unit of the entire Authority and is connected with the Authority members and administrator by the secretary and the director of liaison and information.

Norman B. Haley, acting chief of the newly created bureau of economic regulation, was chief of the air mail bureau of the Interstate Commerce Commission. Rough and Jacobs were assistant directors of the Bureau of Air Commerce. Raising of the status of private flying was done as a result of the feeling that this phase of aviation has been neglected and buried far down in the organization.

## S. E. Gates Heads CAA International Division

Samuel E. Gates, former chief of the international section, Bureau of Air Commerce, has been appointed acting head of the Civil Aeronautics Authority's newly-formed international division.

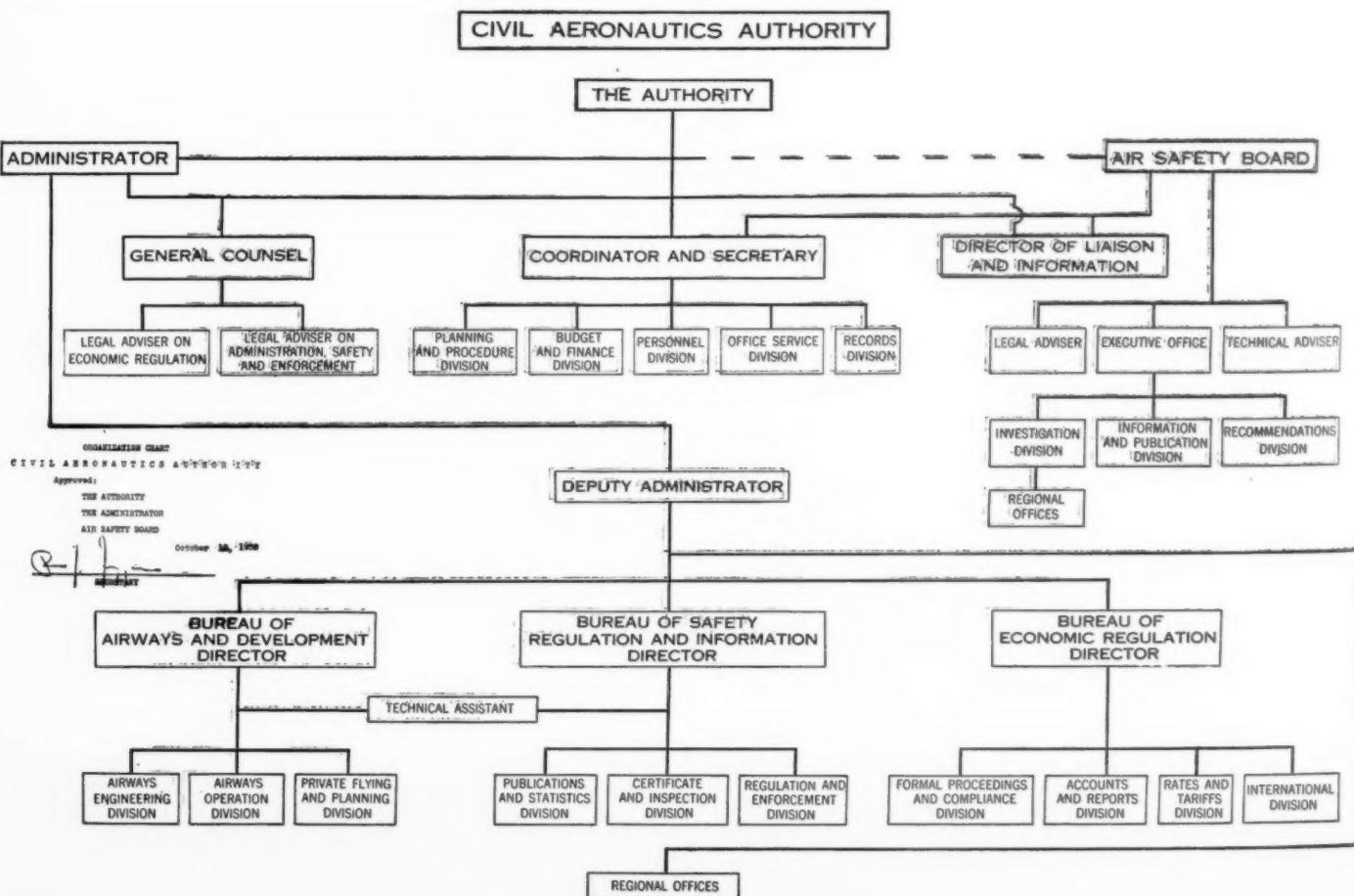
This division, which will function as part of the bureau of economic regulation within the Authority, will have general supervision over matters relating to overseas and foreign air commerce, such as the study of public and private air law, study of carrier rates in overseas and foreign air transportation, study of subsidies given foreign airlines by their governments, arrangement of freedom of passage of American aircraft and airmen in foreign countries, the exchange of information and the development of aeronautics between the United States and foreign countries.

A complete library of international air law and regulation will also be compiled by the new division. There is no such library in the United States today.

Gates, who is from Los Angeles, was awarded the Carnegie Foundation Fellowship for International Law in 1930, and studied at the Academy of International Law at the Hague; the University of Grenoble; L'Institut des Hautes Etudes Internationales, and the University of Paris, from which he holds a degree in international law.

#### Coming Dedication

Corning, Cal., Oct. 10—Marking the dedication of a new hangar here, 3,500 persons attended a program of races and aerobatics yesterday. About 35 planes were on the field.





Eastern, Braniff, C & S All Prepared to Operate Line; EAL, Missouri Central Want St. Louis-Washington Run

"Applicant has completed arrangements for use of airports; has arranged for intermediate landing fields; has arranged for regular weather reports; has radio facilities now installed and available at Memphis, Shreveport and Houston, and has qualified its pilots over the route," Braniff stated. No mention was made of anticipated profits.

Chicago, Oct. 20.—The fourth session of American Airlines' stewardess school is in progress here with 12 girls enrolled. Classes are being conducted by Hazel Brooks, senior stewardess; Newton K. Wilson, supervisor of passenger service; W. W. Kessler, supervisor of stewardesses, and Capt. William Lester, Link Trainer instructor. Girls enrolled are Mary Noble, Kathleen Regan, Jeanette Torry, Carolyn Olson, Winona Woodruff, Bess Woodham, Aileen Hoffland, Jane Morey, Mildred Nichols, Dorothy Ashcraft, Lucia deCastro, and Lucia Greene.

Jack Knight, director of public education for United Air Lines and one of the 10 original U. S. air mail pilots, has canceled his exhibition tour from Los Angeles to New York in an 18-year old De Havilland Liberty powered plane. Forced down in the Mojave desert, Knight got the ship through to Las Vegas, Nev., where he called off the project because of "unsatisfactory flying characteristics and inadequate facilities."

Capt. James Shelly Charles, for eight years a pilot with Eastern Air Lines, and Miss Alice Stone were married in Atlanta recently. Capt. Charles flew the last open cockpit plane to make a scheduled air mail run in the United States, from Chicago to Atlanta on Oct. 14, 1935.

A map of the Eastern United States showing a proposed rail route. The route is marked with solid lines and connects the following cities: New York, Philadelphia, Washington, Baltimore, Richmond, Raleigh, Charlotte, Greensboro, Durham, Atlanta, Savannah, Jacksonville, Daytona Beach, Orlando, Tampa, and Miami. A circular inset in the bottom right corner shows the location of the route within the Eastern United States.

# EASTERN *Air Lines*

## Applications Filed with the CAA

The following applications for certificates of convenience and necessity have been filed with the Civil Aeronautics Authority since those listed in AMERICAN AVIATION Oct. 15.

**Braniff Airways, Inc.** Application for determination of rates of compensation for the transportation of mail. Filed Oct. 20.

**Mid-Continent Airlines, Inc.** between Minneapolis and Tulsa; Minneapolis and Kansas City, and Huron and Bismarck-Mandan. Filed Oct. 21.

**Mid-Continent Airlines, Inc.** Petition for order fixing and determining fair and reasonable rates of compensation over AM28. Filed Oct. 22.

**Chicago & Southern Air Lines, Inc.** from Chicago, Ill., to New Orleans, La., via Peoria, Bloomington, Springfield, St. Louis, Memphis, Greenwood and Jackson. Filed Oct. 11.

**Pan American Airways Company (Nevada)**, from San Francisco to Auckland, New Zealand. Filed Oct. 20.

**Marquette Airlines, Inc.** Memorandum of opposition filed by Transcontinental & Western Air, Inc., to issuance of certificate to Marquette Airlines, Inc., for route St. Louis via Greenville, Ill., Vincennes, Ind., Seymour, Ind., to Cincinnati, Ohio, thence to Dayton, thence via Findlay to Toledo, Ohio, thence to Detroit, Mich., and return. Filed Oct. 20.

**Eastern Air Lines, Inc.** and Delta Air Corporation, between Tallahassee, Fla., and Memphis, Tenn., via Dothan, Montgomery, Birmingham, and Florence-Sheffield-Tusculumbia. Filed Oct. 13.

**Pacific-Alaska Airways, Inc.** from Fairbanks, Alaska, to Juneau, Alaska, Fairbanks to Nome, Fairbanks to Bethel. Filed Oct. 15.

**Boston-Maine Airways, Inc.** from Boston to Caribou, Me., and from Boston to Montreal, Canada. Filed Oct. 20.

**Pan American Airways, Inc.** Miami to Buenos Aires; Miami to Cristobal; Miami to Colombia; Miami to Havana; Miami to Bahama Islands; Miami to Merida, Mexico; Cristobal to Trinidad; Brownsville, Tex., to Cristobal; Brownsville to Mexico City; Haiti to Jamaica, and Miami to Venezuela. Filed Oct. 21.

**United Air Lines Transport Corp.** from Chicago to Glenview, Ill. Filed Oct. 19.

**Transcontinental & Western Air, Inc.** Application for exemption from 401(a), Phoenix, Ariz. to Las Vegas, Nev., via Prescott, Kingman and Boulder City. Filed Oct. 19.

**Pennsylvania-Central Airlines Corporation.** AM14, Detroit, Mich., and Norfolk, Va.; AM32, Detroit, Mich., and Milwaukee, Wis., and between Grand Rapids, Mich., and Chicago; AM34, Washington, D. C., and Buffalo, N. Y.; AM41, Detroit and Sauk Ste. Marie, Mich.; Pittsburgh, Pa., and Buffalo, N. Y.; Pittsburgh, Pa., and Baltimore, Md. Filed Oct. 12.

**Railway Express Agency, Inc.** Application as independent contractor with American Airlines, Boston-Maine, Braniff, Canadian Colonial Airways, Inc., Canadian Colonial Airways, Ltd., Central Vermont Airways, Chicago & Southern, Continental Air Lines, Delta Air Corp., Eastern Air Lines, Inland Air Lines, Mid-Continent Airlines, National Airlines, Northwest Airlines, Penn-Central, TWA, United Air Lines, and Western Air Express. Filed Oct. 19.

**Railway Express Agency.** Application for special permission to waive requirements of section 403. Filed Oct. 12.

**Star Air Lines, Inc.** non-scheduled operations in the Bristol Bay district, the Kuskokwim district, the lower Yukon district, the Cook Inlet district, and along the Alaska Railroad in Alaska. Filed Oct. 13.

**Harold Gilliam.** Fairbanks, Alaska, to Bethel, Alaska. Filed Oct. 14.

**American Airlines, Inc.** AM4, Dallas to Los Angeles; AM7, Newark to Chicago; AM18, Boston to Newark; AM21, Boston to Cleveland; AM22, Cleveland to Nashville; AM23, Albany to Fort Worth; AM25, Washington to Chicago; AM30, Chicago to Fort Worth; Newark to Lakehurst, N. J. Filed Oct. 17.

**Condor Air Lines, Inc.** from Alameda to Monterey, Calif., via San Francisco and Salinas. Filed Oct. 17.

**Wilmington-Catalina Airline, Ltd.** from Wilmington, Calif., to Avalon, Santa Catalina Island. Filed Oct. 17.

**Inter-Island Airways** from Honolulu to Hilo, Honolulu to Port Allen, Honolulu to Maui. Filed Oct. 17.

**Inland Air Lines, Inc.** AM28, Great Falls, Mont., to Cheyenne, Wyo., and AM35, from Huron, S. D., to Cheyenne, Wyo. Filed Oct. 17.

**Inland Air Lines, Inc.** from Huron, S. D., to Cheyenne, Wyo. Filed Oct. 17.

**Panama Airways, Inc.** from Cristobal to Balboa, Canal Zone. Filed Oct. 18.

**Uraba, Medellin and Central Airways, Inc.** from Cristobal, C. Z., to Medellin, Colombia. Filed Oct. 18.

**Thompson Airways, Inc.** Application to operate within a radius of 500 miles of base located at Baltimore, Md. Filed Oct. 19.

**Compania Mexicana De Aviacion.** Application for foreign air carrier permit covering operations along Mexican border with a terminal point at Los Angeles. Filed Oct. 19.

**Western Air Express Corporation.** from San Diego to Salt Lake City, and Salt Lake City and Great Falls. Filed Oct. 19.

**Trans-Canada Air Lines.** Application for foreign air carrier permit between Vancouver, B. C., and Seattle, Wash. Filed Oct. 19.

**Cincinnati Aircraft Service.** Cincinnati to Indianapolis, Columbus, Cleveland, Pittsburgh, Newark, Petoskey, Detroit, Chicago, Atlanta, Hendersonville, N. C., Miami, Hot Springs, French Lick, Lexington, Portsmouth, Huntington and Knoxville. Filed Oct. 19.

**Lech Aircraft, Inc.** Application for certificate to operate within a radius of 500 miles of Armonk, N. Y., and Mineola, Long Island. Filed Oct. 20.

**Harry Earl Homeyer.** Application for certificate to operate within a radius of 500 miles of base located at Robertson, Mo. Filed Oct. 20.

**Monarch Air Service, Inc.** Application for certificate with Chicago as base. Filed Oct. 20.

**Pan American Airways Co. (Delaware).** Application for certificate between New York, N. Y., or vicinity (including Port Washington) and Bermuda, with a right to substitute Baltimore, Md., or vicinity (Dundalk) or Charleston, S. C., as terminal point in the U. S., and Baltimore or vicinity (Dundalk) and Bermuda, with intermediate stop at New York or vicinity (including Port Washington). Filed Oct. 20.

**Pan American-Grace Airways, Inc.** between Cristobal, C. Z., and Buenos Aires, Argentina. Filed Oct. 20.

**Ray Hyman.** Application for certificate to operate within a radius of 500 miles of Rochester, N. Y. Filed Oct. 20.

**Richmond Air Transport & Sales Corp.** Application for certificate to operate within a radius of 500 miles of Richmond, Va. Filed Oct. 20.

**Iowa Airplane Co., Inc.** Application for certificate for permanent non-schedule certificate by a fixed base operator of special charter trips of passengers and property for hire, Des Moines, Iowa. Filed Oct. 20.

**Northwest Airlines, Inc.** AM16, Chicago to Winnipeg, Manitoba, and AM3, Fargo, N. D., to Seattle, Wash., and Portland, Ore. Filed Oct. 20.

**Imperial Airways (Bermuda) Ltd.** Application for a foreign air carrier permit between Bermuda and the United States. Filed Oct. 20.

**Canadian Colonial Airways, Ltd.** Application for foreign air carrier permit between Montreal and New York. Filed Oct. 20.

**Canadian Colonial Airways, Inc.** Application for certificate between New York and Montreal. Filed Oct. 20.

**Mayflower Airlines, Inc.** from Nantucket, Mass., to Providence, R. I.; Boston-Springfield, Boston-Nantucket. All filed Oct. 20.

**Air Activities, Inc.** Application for certificate to operate from Houston, Tex., as a fixed base. Filed Oct. 21.

**Unger Aircraft, Inc.** Application for certificate for non-scheduled operations from New Brunswick, N. J., as a fixed base. Filed Oct. 21.

**Smith Flying Service (K. Russell Smith).** Application for certificate to operate from base located at Forty-Fort, Pa. Filed Oct. 21.

**McEntire, George, Jr.** Application for certificate to operate within radius of 2,500 miles of Midland, Tex. Filed Oct. 21.

**Flight Corporation.** Application for certificate to operate within a radius of 500 miles of Minneapolis and St. Paul, Minn. Filed Oct. 21.

**E. W. Wiggins Airways, Inc.** Application for certificate to operate from East Boston, Mass., and Hills Grove, R. I. Filed Oct. 21.

**Cole, Benjamin.** Application for certificate for non-scheduled operations from following bases: Augusta, Ga., Bangor, Me., Boston, Cincinnati, Chicago, Cleveland, Detroit, El Paso, Fargo, Indianapolis, Kansas City, Los Angeles, Midland, Tex., Minneapolis, New Orleans, New York, Philadelphia, Phoenix, Portland, Me., Providence, Raleigh, Richmond, Rockland, Me., San Antonio, St. Louis, Tucson, Wilkes-Barre, Winston-Salem. Filed Oct. 21.

## Smythe Gambrell, EAL Attorney for Ten Years, Heads Up New Airline

Missouri Central Airlines, which has filed applications with the Civil Aeronautics Authority for four new routes, has its offices at 601 Haas-Howell Building, Atlanta, Ga., according to information appearing in the applications.

The president is E. Smythe Gambrell, who for 10 years has been an attorney and legal adviser to Eastern Air Lines. His headquarters are in Atlanta.

Other incorporators are also from Atlanta, John K. Ottley, Jr., formerly a director of Eastern for six years and at present a director and advertising executive of the *Atlanta Constitution*; and Hunter Bell, for several years city editor of the *Atlanta Constitution* and now an executive of the Coca Cola Co. Ottley is listed as vice-president and general manager of Missouri Central Airlines.

No equipment is owned now, but the company states its desire to purchase an initial order of three Douglas DC-2's or three Lockheed Electra transports, fully equipped. Nominal capital of the new corporation is \$100,000, but later plans call for capital of \$500,000.

The company has filed applications for routes between Washington, D. C., and St. Louis via Louisville; Memphis and Kansas City; Houston to Louisville via Memphis; and Birmingham to Chicago and Nashville to St. Louis.

### A-A Booklet

American Airlines has published a twenty-four page booklet, "Fly With the Flagship Fleet," designed to promote passenger travel on the line. Lavishly illustrated with both black and white and color photography, the booklet explains airline operations, weather reporting, and describes the deluxe service afforded on the flagships. It also answers many questions commonly asked by passengers and prospects not acquainted with airline operation.

### Trainer Creates Interest

United Air Lines found a promotional as well as a practical use for the Link trainer recently when it installed a unit in the men's store of Marshall Field & Co., Chicago. Some 20,000 persons stopped to watch the instrument operate, while attendants took the opportunity to sell air transportation and distribute literature. United is also promoting window displays to demonstrate the amount of clothing that can be carried under the new 40-lb. baggage limitation.

**IF IT'S MORE THAN 100 MILES FLY!**



## Air-conditioned at Airports — Air-cooled in Flight

Travel experience says go on Flagships. Convenient schedules to 57 major cities. It's only an overnight's sleep from coast to coast by Skysleeper. No change of planes. The Southern All-Year Route. Delicious meals without charge. 10% saving on round-trip flights...

Ask Your Travel Agent or Call

**AMERICAN AIRLINES**  
The American Standard of Service

Each application has received a docket number for formal hearing.



## C. R. Smith Joins the Senior Class



On Sept. 30 C. R. Smith, president of American Airlines, celebrated his 10th year of service in the employ of that company. In honor of the occasion other ten year employees of American based at Chicago Municipal Airport gathered in his office to welcome him to the ranks of the tried and true. Seated from left to right are Gage Mace, assistant operations manager; Ben Groth, C. R. Smith, and Bill Littlewood, vice-president in charge of engineering. Standing in the first row, left to right, are Elmer Dougherty, William T. Rath, G. K. Griffin, assistants to the vice-president of operations; Bernard Feitrag; Walter W. Braznell, chief pilot; George Martin Norman, and W. L. Goodyear. In the back row are, left to right, Capt. Lionel Stephen, Chester Gray, Martin Lemmon; Frank A. Ware, asst. supt. of maintenance; Dan Beard, and Capt. William Lester.

## Deutsche Zeppelin Seeks Permission to Cross Atlantic With LZ-130

Application for permission to make 15 to 25 trans-Atlantic round trip airship voyages per year from Frankfurt-on-Main to Lakehurst, N. J., or Opa Locka, Fla., has been filed with the Civil Aeronautics Authority by Deutsche Zeppelin Reederei, G. m. b. H., through its general agent, American Zeppelin Transport, Inc. The German company was the operator of the Hindenburg, and plans future crossings with the new airship LZ-130.

The voyages depend upon the company's securing helium, but no mention was made in the application concerning Secretary of the Interior Ickes blocking the company's attempts to get the gas from the United States. On Jan. 26, 1938, application was made to the Department of the Interior for 10,000,000 cubic feet, and a deposit check for \$70,661.52 was drawn. On Feb. 3, the Secretary of State advised the company that a license to export 2,600,000 cubic feet of helium had been issued.

"Since that time," the application stated, "the applicant has been unable to proceed with proposed operations and has been awaiting action upon its order to purchase 10,000,000 cubic feet. During this waiting period, the applicant has maintained helium gas transfer equipment and personnel at Houston, Tex., at considerable expense and has maintained flight and mechanical staffs in Germany for the purpose of operating the LZ-130.

"Recently the applicant made additional alterations to the LZ-130 to permit the use of hydrogen for the purpose of keeping its flight and mechanical personnel in training and to carry out the necessary trial flights, in default of which applicant feared that its flight personnel would eventually lose its skill and that the flight technique of 40 years of experience would be lost.

"The applicant submits that its failure to operate during the 1938 season under the permit of the Secretary of Commerce cannot be attributed to inadequacy of equipment or inefficiency of the applicant."

American Zeppelin Transport, Inc., wholly owned by citizens of the United States, hopes eventually to operate in conjunction with the German company, "as and when it acquires trained personnel and American flag airships," the application said. Deutsche Zeppelin Reederei will materially assist in the training of personnel for the American company.

Pointing to its past record, Deutsche Zeppelin stated that in 1936 it carried 1,018 passengers and 18,300 lbs. of mail and property across the north Atlantic. Of the passengers, 537 made the eastward crossing, and 481 traveled west.

The LZ-130, according to the application, is 803.82 ft. long, 146.65 ft. high, and 135.17 ft. in diameter. Total lifting gas volume is 7,063,000 cubic feet. The four Mercedes-Benz 1200-hp. Diesel engines give it a top speed in still air of 84.375 mph., and a cruising speed of 78.125 mph. Passenger capacity is 40 and a crew of 40 is also carried.

## UAL Stewardess School

Chicago, Oct. 22—United Air Lines has established an improved stewardess training school here in which girls will be given 100 hours of practical experience before taking over their regular duties. Myrtle Frederickson, for several years an active stewardess, has been appointed chief instructor of the school. Classes in all phases of air transportation will be conducted with United's department heads, pilots and operations officials serving as lecturers.

## UAL Press Chiefs Convene

Chicago, Oct. 24—United Air Lines' publicity chiefs are meeting here this week for a three day session with line officials and Bob Johnson, director of advertising and publicity. The visitors are: Dick Rummel, Seattle; Bob Neff, New York; Pascal Cowan, San Francisco; Art LaVove, Los Angeles; Dick Smith, Chicago; Harvey Hancock, Salt Lake City.

## EAL Offers Tallahassee-Memphis Route to Delta Air Corporation for \$1

Eastern Air Lines and Delta Air Corp. on Oct. 13 filed a joint application with the Civil Aeronautics Authority seeking permission to transfer from the former to the latter, "in consideration of the sum of \$1.00, all right, title and interest in and to a permanent certificate of convenience and necessity authorizing the transportation of mail, passengers and property between Tallahassee, Fla., and Memphis, Tenn., via Dothan, Montgomery, Birmingham and Florence-Sheffield-Tusculumbia, Ala."

Operation of the Tallahassee-Memphis portion by Eastern would necessitate additional personnel, radio facilities and smaller aircraft. Because the planes could not be used on any other part of Eastern's route, it would be an "expensive undertaking, producing uneconomical operation," the company said. The entire route must be in operation by Nov. 26, 1938. Eastern has been flying the Atlanta-Tampa section since Oct. 10.

The Post Office Department awarded this line to Eastern several months ago for 17c per mile, coupling it with routes from Tampa to Tallahassee and from Tallahassee to Atlanta. Eastern stated in the application to the C.A.A. that it was never interested in the Tallahassee-Memphis section, and only bid because it was included in the P. O. advertisement. Only a connection between Atlanta and Tampa was desired, Eastern said.

Delta, on the other hand, only wanted the Tallahassee-Memphis section, but was forced to bid on the entire route. Its bid of 23.4c was considerably higher than it would have been "had the segment of the route from Tallahassee to Memphis been advertised separately," the company stated.

Delta, which operates AM24, Charleston-Atlanta-Port Worth, with five Lockheed Electras, would not be forced to hire additional personnel or to buy new equipment. The Lockheeds are now flown on an average of six hours a day, and by also using them on the Tallahassee-Memphis route, this could be increased to 7½ hours, resulting in lower operating costs. Use of the planes on both routes is made possible by the junction at Birmingham.

Only some additional ground radio equipment would be required to operate the route, Delta states. If the application is granted the company will enter into an arrangement with Chicago & Southern Air Lines for joint use of its operating and traffic facilities at Memphis, and a similar agreement will be effected with Eastern at Montgomery and Tallahassee.

"Eastern Air Lines alleges that after investigation it has determined that the operation of such service by Delta Air Corporation can be carried on effi-

ciently and economically and that the public interest would best be served by transfer of such certificate," Eastern told the C.A.A.

Neither carrier recommended a rate for the carriage of mail over the route, but it is known that the Post Office will not pay more than the original 17c per mile contract price, at least until such time as the C.A.A. sets a definite rate.

## P.O. Sets Opening Dates for New Lines

The Post Office Department has announced the following opening dates for new air mail routes:

AM38, Phoenix, Ariz., to Las Vegas, Nev., by TWA on Nov. 1.

AM39, Jacksonville, Fla., to New Orleans, La., by National Airlines on Nov. 1.

The portion of AM40 between Atlanta, Ga., and Tampa, Fla., has been operated by Eastern Air Lines since Oct. 10, but the section from Tallahassee, Fla., to Memphis, Tenn., has not been opened. Eastern and Delta Air Corp. have applied to the C.A.A. to transfer this latter section to Delta for \$1.00.

AM31, Detroit to Sault Ste. Marie, Mich., has been operated for some time by Penn-Central. Eastern Air Lines opened AM42 between Houston and San Antonio, Tex., on Oct. 20, but has set no date for inauguration of service over the remainder of the route into Brownsville.

## Link Vancouver-Montreal

Montreal, Que., Oct. 17—Trans-Canada Air Lines today opened daily mail and express service in both directions between Montreal and Vancouver. For the present the westbound trip will require 25-hrs. 20-mins. elapsed time, and the eastbound flight 19-hrs. 3-mins. Planes leave here at 7 a. m., arriving at Vancouver at 5:20 a. m. Vancouver departures are at 7 p. m., with arrival here at 5:03 p. m. Connections are made at Lethbridge by planes to and from Calgary and Edmonton.

## Freng Talks Safety

R. T. Freng, superintendent of flying for United Air Lines, has completed a series of meetings with all pilots on the line for the purpose of outlining safety plans for the coming winter. Meetings were held at Newark, Chicago, Cheyenne, Oakland and Seattle.

## AMERICA'S FIRST AIRCRAFT INSURANCE GROUP

has

Four Active and Five Inactive Pilots on its staff

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724 So. Spring St., Los Angeles, Calif.

## American First Line to Announce Shift to New L. A. Municipal Port

American Airlines will shift its entire west coast operations base from Grand Central Air Terminal in Glendale to Los Angeles' improved municipal airport shortly after July 1, it was announced Oct. 12 by C. R. Smith, president of American. Some of the line's operations may be directed from the new port even before the complete changeover, it was said.

Blueprints were distributed to Los Angeles and airline officials Oct. 3 revealing plans for an announced \$8,250,000 expenditure to make the mile-square Los Angeles Municipal Airport the finest on the west coast. When the field is ready next summer all four major airlines will move operations offices and activities there. Formerly known as Mines Field, the Inglewood tract already is a center of activity, with a WPA project underway embracing total expenditure of \$419,886, of which WPA is furnishing \$248,613 and the city \$171,273. This project, Unit 1, includes construction of a new main east-west concrete runway 300-ft. by 4,650-ft., drainage facilities for the entire field, sanitary sewer service to the north side where the proposed airline terminal will be located, laying of water mains, and grading. Unit 1 will be completed in three or four months, according to R. B. Barnitz, director of Airports.

Simultaneously, the city is spending \$42,000 installing flush type lights along the new runway, and constructing a boundary light circuit around the entire field. Complete lighting system installation will cost \$170,000. Now on file with WPA is an application for \$3,801,022 of federal funds with which it is proposed to complete field work and passenger terminal facilities. This project (Unit No. 2), includes a pro-

posed north-south runway 300-ft. by 4,300-ft., a supplemental east-west runway 200-ft. by 4,400-ft., a northwest-southeast runway 200-ft. by 5,300-ft., and a reconstructed runway 200-ft. by 4,400-ft. on the south side of the field. All will be hardsurfaced.

"The passenger terminal facilities proposed include a new administration building and three steel and concrete hangars," Mr. Barnitz told AMERICAN AVIATION, "all to be on the north side of the field. Plans for the administration building call for a 2-story fireproof structure, with a control room, embracing 80,000 sq. ft. of floor space. Each hangar will be 200-ft. by 480-ft. with three bays 160-ft. by 200-ft., with a vertical clearance of 40 feet. Each hangar also will have shop and office space 50-ft. by 480-ft.

"All of the airlines serving the Los Angeles area have joined in a public statement to the effect that they will transfer their operations to this field as soon as these facilities are ready for them."

Mr. Barnitz said "I have personally been very much impressed by the efficiency and accuracy with which the instrument landing system installed at the Oakland airport functions, and I think the Los Angeles Municipal Airport is well adapted to the use of a system of a similar type. The installation of such a system here, coupled with the new radio range station serving this area, would undoubtedly make feasible the carrying on of regularly scheduled operations in and out of Municipal Airport irrespective of weather conditions." Arrangements for financing such an installation have not been completed, nor has the type of system to be adopted been decided.

## Airlines Continue Scrip; C.A.A. to Rule On Question Only If Petitioned

Whether the use of scrip by the airlines is "discrimination" under section 404(b) of the Civil Aeronautics Act will not be decided by the Authority unless specific requests for interpretation of the section are received, it is learned.

Section 404(b) does not mention scrip, but states that "no air carrier or foreign air carrier shall make, give, or cause any undue or unreasonable preference or advantage to any particular person, port, locality, or description of traffic in air transportation in any respect whatsoever or sub-

ject any particular person, port, locality or description of traffic in air transportation to any unjust discrimination or any undue or unreasonable prejudice or disadvantage in any respect whatsoever."

The effective date of the section was postponed until Oct. 17 and it was thought that the C. A. A. intended to decide whether discrimination was involved. However, no announcement was made on Oct. 17, and the various carriers are continuing the use of air travel cards. It is said to be certain that there will be requests for a definite ruling on scrip by the Authority.

### Leaves UAL for TCA

Montreal, Oct. 15—Trans-Canada Air Lines has appointed W. J. Dalby as district traffic agent at Vancouver, B. C. He was formerly district traffic manager for United Air Lines in the same city. Born in Vancouver June 15, 1908, and educated there, he later served as traffic agent for Canadian Airways and traffic representative for Dollar Steamship Lines and Pacific Steamship Co., before joining United in July, 1934. As a diversion from business, he spent two months in Japan playing football on a representative Vancouver team several years ago.

### EAL Shifts at Louisville

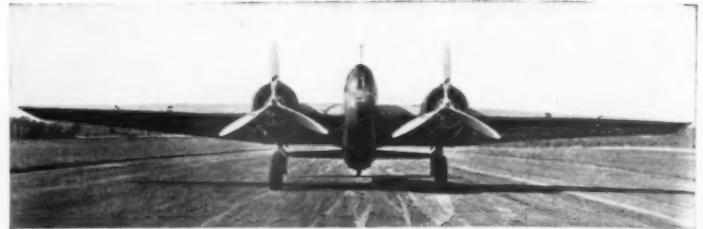
John H. Keebler has been transferred from New York to Louisville, where he will be district traffic manager. Harry A. Parks has been transferred from Louisville to Chicago.

### Elsmore Promoted by WAE

Los Angeles, Oct. 24—Ray T. Elsmore, for 10 years a pilot for Western Air Express, has been appointed assistant chief pilot of the line, C. N. James, vice-president in charge of operations, has announced. A graduate of Utah University's college of law, Elsmore continues to maintain his status of practicing attorney. He holds the rank of major in the Air Corps Reserve and is active in the affairs of the Mormon Church, having been a Bishop. He has flown 12,000 hours and covered more than 1,000,000 miles. Headquarters will be in Salt Lake City.

Frank Brunton, formerly with the Chicago Herald and Examiner, is now connected with the publicity department of American Airlines in Chicago. Brunton is a graduate of Northwestern University's Medill School of Journalism.

## Martin's 300th Twin Engine Bomber



The Glenn L. Martin Co. recently completed its 300th Martin bomber (shown above) of the twin engine type series which began with the prototype of the well known B-10B, now represented by model 166.

## I. C. C. Dismisses Eastern's Petition for Base Mileage Increase on AM6

The Interstate Commerce Commission has dismissed the petition of North American Aviation (now Eastern Air Lines) for an increase in base mileage on AM6, Newark, N. J., to Miami, Fla. The rate for the route was originally fixed at 26¢ per mile on a base of 145,000 miles per month.

Main point advanced by the Commission in dismissing the petition was that the carrier had not adequately proved its case. "If it shall be contended or alleged by the holder of an air mail contract that the rate of compensation in force for the service involved is insufficient, the burden of establishing such insufficiency and the extent thereof shall be assumed by him," the I.C.C. stated. "We think that burden has not here been sustained."

Up to July 16, 1937, Eastern contended, the base rate of 26¢ had been received for mail loads of 300 lbs. or less, and frequently, when loads were over this amount, compensation had been at rates ranging from 28.6¢ to 37.8¢ per mile. Effective July 16, 1937, however, an additional daily round trip in mail-pay service between Jacksonville and Miami was added, increasing the monthly total by approximately 20,600 miles. Because of the I. C. C. sliding pay scale, the rate on the route was automatically reduced from 26¢ to 25¢. Eastern contended that the reduced rate was not fair and reasonable and asked an increase in base mileage to which the rate of 26¢ would be applicable.

Eastern had stated that the anticipated increase in operating expenses for 1938 would be \$336,601, of which \$173,153 is allocated to AM6. William C. O'Brien, Post Office Department lawyer, objected to this on the grounds that there would be offsetting increases in revenue. Upon cross examination, the carrier admitted that the manage-

ment had planned its future program on the basis of a normal increase of approximately 10% in passenger revenue, but that to October, 1937, this had not materialized. Some gain is still expected, however, the carrier said.

Reports to the Postmaster General covering operations for the 12 months period ended Oct. 31, 1937, showed that 3,787,400 airplane miles were flown on AM6, of which 3,704,273 were in revenue service. On Sept. 30, 1937, current and accrued assets totaled \$643,906, against current and accrued liabilities of \$417,662.

"If all adjustments of the recorded figures were made as contended for by the carrier, the result of operations on AM6 is a net operating income for the year ended Oct. 31, 1937, of approximately \$30,000," the I. C. C. conclusion stated. "However, the income would be substantially increased if a more equitable division of operating expenses between the several routes operated... were made. Although the record indicates that revenues from nonmail schedules exceeded direct aircraft operating expenses, but failed to meet a proportionate share of all expenses, no attempt was made to ascertain the number of miles flown in such service or the additional expenses occasioned thereby. With respect to the necessity of considering increased expenses in the future, the probability of increased passenger and express revenues can not be overlooked. Furthermore, in Air Mail Compensation, supra, the Commission recognized that revenues from sources other than mail may not be all that such services reasonably warrant."

Gerald B. Brophy and George A. Spater represented Eastern in a legal capacity at the hearings on the case, while O'Brien appeared for the Postmaster General. The decision was handed down by Division 3 of the I.C.C., composed of Commissioners McManamy, Mahaffie and Miller.

### Suit Against Gilpin Fizzles

Tucson, Ariz., Oct. 11—Superior Judge William G. Hall yesterday dismissed a \$4,000 suit against Gilpin Airlines, filed by the Transportes Aereos del Noroeste S. C. de R. L., of Mexico, because the plaintiff failed to post security for costs. The Gilpin company had repaired a plane and held it for costs. The Mexican company sought to recover the sum at which the craft was valued.

### New Red Bluff Manager

Red Bluff, Cal., Oct. 18—Andrew F. Castellotti has assumed management of Tehama County airport, and will operate Duck Airways Service here.

### Pfennig Marries

R. E. Pfennig, new manager of operations for United Air Lines' New York-Chicago-Denver section, calmly informed friends Oct. 17 that he and Jerry Krise, chief stewardess, had been married. The date and place are secrets.

## WAGE-HOUR LAW

### Airlines Exempt But Mfrs. Must Obey Provisions

The Wage-Hour Act which went into effect Oct. 24 does not effect airlines, but aircraft manufacturers are included under its provisions.

While the regular wage scale provisions do not affect aircraft companies, since the latter's wage scales are much higher than the minimums laid down by the act, the new law does have a bearing on payment for over-time and probably will restrict experimental development to some extent. The act calls for payment of one and one-half times the regular rate of pay for all over-time.

### Milner With Ryan

San Diego, Oct. 24—John D. Milner, former commercial operator of Tucson, Ariz., has been appointed factory sales representative of the Ryan Aeronautical Company.



## MARQUETTE PERMIT PROTESTED BY TWA

Examiner Nye Allows Appearance of Intervenor After Discussion on Point of Law

An important point of law, not provided for in the Civil Aeronautics Act, was discussed at length in the hearing of Marquette Airlines, Inc. before Examiner A. G. Nye of the Civil Aeronautics Authority on Oct. 25-26. Marquette is seeking a certificate of convenience and necessity for its route between St. Louis and Detroit, with stops at Cincinnati, Dayton and Toledo. The hearing was adjourned to reconvene on Nov. 2.

Transcontinental & Western Air, Inc., which had filed a memorandum of opposition to the granting of the certificate under the "grandfather" clause, was represented by Gerald Brophy, counsel, and it was over the company's appearance that the question arose. L. W. Pogue and S. E. Gates, C.A.A. lawyers, contended that TWA's memorandum did not make it a party to the case, or an intervenor. Therefore, they stated, Brophy's cross-examination would have to be conducted through government counsel.

Although the Civil Aeronautics Act does not state specifically the steps necessary to become an intervenor, Examiner Nye in his first ruling stated that "inasmuch as no petition of intervention has been filed by TWA, it is not a party to this proceeding." Brophy then read such an application into the record, and it was also denied. However, after a recess in which Examiner Nye looked up some precedents in law, he reversed his decision and allowed TWA to appear. Dwight H. Green, lawyer for Marquette, and the C.A.A. lawyers, objected but were overruled. The decision will stand until the C.A.A. confirms or reverses it. It is Nye's belief that a third party would not appear unless it had "substantial interest" in the case, and for this reason he allowed TWA to participate. Had Brophy been denied an appearance, he would have been able to appeal in the Court of Appeals any decision made by the C.A.A. It is believed that the C.A.A. will uphold Nye's ruling.

TWA objected to the issuance of a certificate on the grounds that Marquette has taken and will take business from TWA, that Marquette was in violation of Section 15 of the Air Mail Act of 1934, and section 408 of the Civil Aeronautics Act, and that Marquette was not an adequate and efficient carrier between May 14 and Aug. 22, 1938, the "grandfather" period.

Because Marquette leases its three Stinsons from American Airlines, and because American handles Marquette's ticketing, ramp service, weather reports, and other services, Brophy stated he will prove that American and not Marquette was the carrier during the "grandfather" period.

E. P. Odenwalder, secretary-treasurer and director of Marquette, testified that the company has \$118,466.52 cash in the bank. All 19,000 shares of capital stock issued and outstanding is owned by John E. McKelvy of Pittsburgh. The company has 22 persons on the payroll.

### Fort Wayne Change

Charles Sessions, TWA manager at Fort Wayne since August, 1937, was transferred to Camden Oct. 22. He was succeeded at Fort Wayne by E. E. Kelsey, from Chicago. Earl J. Miller, Fort Wayne agent, will remain.

## 1939 Curtain Raiser on Big Ships; United to Buy 1st DC-4—\$400,000

Nineteen thirty-nine will be the year of big transports. With the Douglas DC-4 already flying, the industry will receive four more notable transports of new type and design before another 14 months. The 33-passenger Boeing 307 will be out early in the year. The Curtiss-Wright Model 20, a 30-passenger twin-engine transport, will also fly before spring is far along. The Douglas DC-5, scheduled to be the big surprise of 1939, should fly during the year and make a strong bid for some of the smaller but busy airlines. And Lockheed will follow up with a 24-passenger transport now under construction and which will involve some new slants on design.

United Air Lines is scheduled to purchase the first DC-4 model now flying, but is not expected to rush into subsequent orders. TWA will receive six Boeing 307's as per its contract made some time ago. American has abandoned its idea of buying Boeings but is understood to be waiting for the Curtiss-Wright transport with considerable interest.

Meanwhile, inspired by a Science Service syndicated newspaper article, considerable unfavorable propaganda has been floating around about the "costly mistake" of building larger transports, particularly the DC-4. The airline industry which experienced a bad summer passenger season and red financial ledgers, has not been in a "big ship" mood and has, to some extent, aided and abetted this unfavorable publicity about the new ships. But insiders feel that this pessimistic attitude will change during 1939. Barring accidents, next year promises to be one of the biggest boom years in air transportation. The "big ship" mood will return.

There seems to be no question but what the DC-4, first of the parade of new equipment, surpassed by far the expectations of performance and is ranked as one of the major outstanding engineering achievements of aviation. From the standpoint of economical operation on the airlines, the DC-4 is somewhat ahead of its time, but insiders believe the time for the big ships will come sooner than expected.

Here are some comparisons of costs, seats, and operation costs per mile:

DC-4 will cost about \$400,000 each if 25 are produced. It will seat 42 passengers and cost about \$1.20 a mile to operate.

Boeing 307 will cost about \$300,000 each, will seat 32 passengers and cost about \$1.05 per mile to operate.

DC-5 is smaller than the DC-3 and will cost around \$100,000 (Douglas Co. says \$85,000, but probably optimistic), with seats for 18 passengers and will probably cost about 65¢ per mile to operate.

The DC-3 currently in use by the major airlines cost \$120,000 each, seat 21 passengers and cost about 70¢ per mile to operate.

In the above comparisons, the DC-4 will have a useful load of about 20,000 pounds, the Boeing 307, 15,000 pounds.

According to experts in the industry, the Boeing 307, costing 15¢ per mile less to operate, can be a more profitable ship than the DC-4 on non-stop hops up to 800 miles, such as New York-Chicago. Beyond 800 miles, the DC-4 gets the edge, particularly if good cargo business can be worked up. With high cargo loadings, the DC-4 can be profitable on shorter mileages.

Not enough is yet known about the Curtiss-Wright Model 20, the DC-5 and the 24-passenger Lockheed to make reasonable comparisons, but the Model 20 is expected to make a good showing against the DC-4 and the 307. The DC-5 and the new Lockheed are definitely in a different class and will appeal more to lines making more stops, such as Pennsylvania-Central, Delta and Chicago and Southern. The DC-5 will have a tricycle landing gear, very slow landing speeds, larger wing area and will be a utility ship embodying the chief principles of the DC-2, the DC-3 and the DC-4.

It is a safe bet that no airline will order new equipment until its present seats are filled, but October business has been so good that optimism is once again reigning. American Airlines has astonished the industry with its rapid climb in passenger traffic and not all of the climb by any means was due to the hurricane emergency in New England. Other lines, such as Penn-Central, are fully aware that new equipment is going to be needed before long.

About 70% of airplane mileage costs are fixed (gasoline, maintenance, pilots, etc.), about 15% are for traffic, advertising and research; and another 15% covers somewhat changeable items such as property, unemployment, social security taxes, insurance, etc.

### Vachon to Trans-Canada

R. Vachon, formerly with Quebec Airways, Ltd., Montreal, has joined Trans-Canada Air Lines at Winnipeg, Manitoba.

## MORE UNITED CHANGES

Addems and Coppin Named Flight Operations Heads

United Air Lines has announced the following personnel changes to supplement those announced several weeks ago:

Walter J. Addems has been appointed superintendent of flight operations on the eastern division with his base at Chicago, and Cliff Coppin was named to the corresponding position on the western division with headquarters at Oakland.

Don Magarrell, formerly director of the company's dining service, is now director of passenger service, succeeding R. E. Pfennig, who has become manager of operations of the eastern division.

B. C. Voight and Pat Barnes were named superintendents of trip service on the eastern and western divisions respectively.

Don Tyler and Fred Page are now superintendents of mechanical operation on the eastern and western divisions, respectively.

P. C. Sandretto is now superintendent of United's communications laboratory at Chicago, succeeding Herbert Huckle who is now with the Air Safety Board of the C.A.A.

### Groth Promoted

Ben Groth, master mechanic on the maintenance staff of American Airlines at Chicago, has been promoted to the position of crew chief in the same division, according to announcement by J. F. Martin, supervisor of maintenance for the company. Groth, who makes his home in Chicago, has the second longest seniority in American. He started to work for the company on Feb. 6, 1926.

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## Pilots Made World's Fair Ambassadors



Pilots, co-pilots and hostesses on ten transport planes of major companies were created ambassadors of good will for the New York World's Fair 1939 by Grover A. Whalen, president. Ceremonies took place at Floyd Bennett Field, Brooklyn. Above are, l. to r., Sheldon T. Shoff, American Airlines; H. P. Little, United; Mr. Whalen, and C. W. Lehr, Eastern Air Lines.

## New Indicator to Warn Pilots of Stalls Developed by NACA

Small Sharp Leading Edge Produces Local Stall Before Wings Begin to Lose Lift; Use on Fast Military Planes Seen

A new type of indicator that warns a pilot when his plane is about to stall has been developed by the National Advisory Committee for Aeronautics laboratories at Langley Field, Va., and is described by the Committee as "an important step toward greater safety in flight."

The new instrument, working on much the same principle as an air-speed meter, is located on the upper surface of the wing a short distance behind a special sharp-edge portion built on the leading edge of the wing. This sharp edge can be so adjusted that when the main part of the airplane wing approaches the stalling angle a local stall over the small sharp leading edge is produced. The stall indicator detects the resulting flow separation in this small region sufficiently before the wing as a whole stalls, so that the pilot is warned to nose the plane down and recover safe flying speed before general loss of lift takes place.

Warning may be given to the pilot in any of a number of ways—by blowing a horn, lighting a warning light, or shaking the control stick or rudder pedal.

"When there is nothing in the behavior or control characteristics of the airplane that indicates the impending stall, great dependence must be placed on the air-speed meter," stated the NACA report, which was written by F. L. Thompson, Langley Memorial Aeronautical Laboratory. "Unfortunately, however, the stalling speed varies with wing loading and the air-speed meter, therefore, is not a reliable stall indicator."

The stall-warning device makes use of a modified type of pitot-static head set close to the wing surface in a region wherein stalling occurs at an angle of attack considerably below that at which the main portion of the wing stalls. This head is connected to a pressure cell fitted with electrical contacts. When the air flow in the region in which the head is located breaks away from the wing surface, the pressure indicated by the head drops sharply to zero. When this occurs, the electrical contacts close a circuit that operates a warning signal.

"In general," the NACA report said, "the stall-warning device will require two heads installed on the airplane, one near each wing tip. With such an arrangement, the asymmetry of the

angle-of-attack distribution in banking, which amounts to something of the order of 5 or 6 degrees, will be taken care of. Another advantage of placing the device at the tip is that it can be placed beyond the edge that is covered by the rubber overshoes that are commonly used for de-icers.

"The behavior of the stall-warning device under icing conditions is unknown. In designing the head, provision was made for heating it electrically as is common practice with air-speed heads, as proper functioning of the device would demand that it be kept free from ice formation. If it did become clogged with ice, it would presumably give a warning signal as though the wing were stalled at all times. The influence of ice on the sharp edge in front of the head might or might not impair the functioning of the device. It is possible that the ice would cause the head to indicate a stall at a somewhat lower angle of attack than customary. In this case the effect might be desirable, since ice adhering to the main portion of the wing probably would cause the complete wing to stall earlier than usual."

Recommendation that the device be installed on pursuit and fighter planes that often stall without warning, is contained in the following statement: "It is of interest to note a particular application that the device might have to highly maneuverable pursuit or fighter planes. Several such airplanes are so easily stalled without warning in violent maneuvers that such stalling is often inadvertent. It may occur in dive pull-outs, sharp turns, loops, or other maneuvers at speeds ranging from the minimum speed in level flight to about 2½ times this minimum speed, depending upon the acceleration imposed."

"When the stall occurs, the airplane rolls more or less violently, depending on how the stall develops and the stability characteristics of the airplane. In fact, the maneuverability of the airplane may be seriously limited by this characteristic. It would appear that the stall-warning device would be very useful in such cases and it appears desirable that an installation be made on an airplane of this class for flight trials. It would be very important in such an installation that the moving parts of the contacting device or other moving parts be unaffected by the high acceleration."

The indicator caused little or no drag during tests it is learned, but a neater installation of the head is said to be undoubtedly possible in view of the fact that the only part that need be exposed to the air stream is the dynamic opening.

## AA Places \$573,890 Order for 5 DC-3's

American Airlines has placed a \$573,890 order with the Douglas Aircraft Co. for five 21-passenger Flagship clubplanes, to be delivered by next March, according to announcement by C. R. Smith, president of American. With the new planes in service, the company will be operating nine skysleepers, 26 DC-3's, and 15 DC-2's.

The increase of equipment, Smith said, is the result of upward business trends and is based on a study of air transport needs which indicate that 1939 will be a banner year in the industry. Increased air travel next summer in connection with the New York World's Fair and the Golden Gate Exposition in San Francisco is also anticipated.

## Coast Guard Flyers Honored



In recognition of a flight he made 130 miles out to sea through fog and rain to rescue a severely injured seaman, whose life was saved by prompt hospitalization, Lieut. R. L. Burke, Coast Guard pilot, was presented on Oct. 14 with the Distinguished Flying Cross by Secretary of the Treasury Morgenthau. In the photo are left to right, Rear Admiral R. R. Waesche, Commandant of the U. S. Coast Guard; Lieut. Burke, Secretary Morgenthau and Stephen Gibbons, assistant secretary of the Treasury in charge of the Coast Guard. (Harris and Ewing Photo).

## Louis Mueller, One-Time Varney Head, Is Elected Chairman of Continental

Louis H. Mueller, of San Francisco, officially re-enters the field of air transportation as result of his election as chairman of the board of Continental Air Lines, according to announcement by Robert F. Six, president of the Denver-El Paso line.

Now 43 years of age, Mr. Mueller has been prominent in airline activities in various capacities over a period of years and was one of the numerous prominent airline executives on the famous "black list" of Postmaster General Farley. The "black list" restrictions were removed by the last Congress, permitting those on the list to re-enter open affiliations with airlines carrying mail.

Mr. Mueller learned to fly in the Army during 1918 and was an instructor in flying at March Field, Riverside, Cal., until the latter part of 1919. He resigned from the Army and joined Walter Varney the following year as sales manager for Varney's Pacific Coast Agency for the Lincoln Standard and Bristol Tourer planes. Besides selling planes, he ran two flying fields, one of which was a school of instruction at Redwood City, Cal. He returned to the insurance business in 1922 when commercial aviation went into a low ebb.

In 1929 Mr. Mueller rejoined Walter Varney as president of Varney

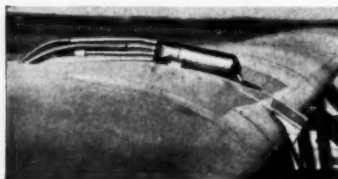
Air Lines. The company had an air mail contract between Salt Lake City and Pasco, Wash., this route being extended later to Portland, Ore., Seattle, and Spokane, Wash. When United Air Lines purchased Varney, Mr. Mueller became a director of that company, resigning in 1933.

The new chairman held a private pilot's license for a number of years but has discontinued active flying. He is prominent in insurance circles, serving at present as president of Associated Insurance Fund, Inc., chairman of the board of Associated Fire & Marine Insurance Co., and chairman of the board of Associated Indemnity Corp. His headquarters will remain in San Francisco.

"Continental's position in forthcoming expansion is greatly strengthened by Mr. Mueller's leadership," Mr. Six said, "through both his long aviation experience and through the important interests he represents."

Mr. Six also announced election of Sheldon G. Cooper, 35-year-old San Francisco attorney, as a new vice president, succeeding Delbert W. Radke. Mr. Cooper is a director of the Hibernia Bank of San Francisco and is associated with Mr. Mueller as a director in the latter's various insurance companies.

## Stall Warning



Two views of the stall warning device as it appears on the wing of a Fairchild 22. Perfected models will cause practically no drag. (NACA Photo).

## A Skysleeper's Track of Light



A photographic track made by the wing lights of a TWA Skysleeper plane taking off from Kansas City Airport. The rate of climb is 450 feet per minute. The line is using such photos in its promotion for Skysleepers, emphasizing gradual climb and resulting passenger comfort.



## New Automatic Direction-Finder Is Announced by Sperry, RCA

An automatic direction-finder which, when once tuned to a station, points a needle continuously and automatically at that station so that the pilot need pay no attention to its operation, is announced by Sperry Gyroscope Co. and RCA Manufacturing Co.

In recent tests an American Airlines DC-3, equipped with the direction-finder, took off from Floyd Bennett Field and "found" a Navy truck, on which a 20-watt transmitter had been mounted, behind the hangar at Valley Stream Airport. The new device when tuned to station WEAH guided the plane to a point directly over the towers.

According to the manufacturers, "the Sperry-RCA automatic direction-finder requires only that the pilot tune to a station. The pointer on the instrument has an arrow on one end and indicates immediately the exact bearing of the station, and furthermore continues to give the bearing even up to the point of passing over the station. One of the most valuable features of the instrument is emphasized because, in addition to having indicated the bearing of the station, it immediately shows the pilot when he has passed over the station and gives positive information to confirm the 'cone of silence' which he may have received if he has been flying on the regular radio beam. The cone of silence has been recognized as rather negative information because, as the term implies, it is a momentary complete absence of any signal."

The continuous and automatic instrument may also be used as an auxiliary or checking device so that the pilot may confirm at a glance his position, which he has computed by some other form of navigation.

In obtaining a drift or "crab" angle at any given time, a pilot may tune a station toward which he is flying and

observe whether or not the heading of the plane is constantly changing. It is only necessary then, according to Sperry, to turn the plane to the right or left and note the difference between the actual heading of the ship and the direction of the station when the bearing is not changing to know the "crab" angle that must be taken to make allowance for the wind.

When flying along a regular beam, any station on either side of the course may be tuned in, and the pointer will give immediate indication as to how far along the beam the plane has progressed. It is also said that the Sperry-RCA direction-finder makes it possible to obtain bearings when static conditions are so bad as to make it virtually impossible to obtain a null or "no signal" if operating the ordinary type of hand-operated loop.

The face of the instrument is mounted horizontally. The pilot may orient himself by visualizing the location of the station, with respect to the ship he is flying, as being in the direction of the arrow head relative to the miniature airplane shown on the instrument. The navigation scales eliminate all arithmetic.

All dials and switches, such as volume control, band change switch, course setting knob, station frequency indicator, station tuning dial, antenna switch, anti-static switch and lighting control, are placed on the instrument within easy reach.

J. G. Flynn, Jr., superintendent of communications for American Airlines, and chairman of the subcommittee for radio direction-finding of the Radio Technical Committee for Aeronautics, has been in charge of the test flights.

### Wind Tunnel Rebuilt

The National Bureau of Standards, Washington, has redesigned its 4½-ft. wind tunnel, built in 1917, to produce a wind speed of 120-mph.

### Long Beach Night Operation

Long Beach, Cal., Oct. 21—Municipal Airport will become a 24-hour field Nov. 1 with day and night traffic control service.

### Openings Deferred

The War Department has announced postponement of opening date on bids for single-seater pursuit planes from Nov. 15 to Jan. 10.

Reading, Pa.—Municipal airport will be opened Nov. 6 and local officials claim that TWA, United, American and Eastern are contemplating service here.

## Hester Now a Colonel and Chief Whirlwind

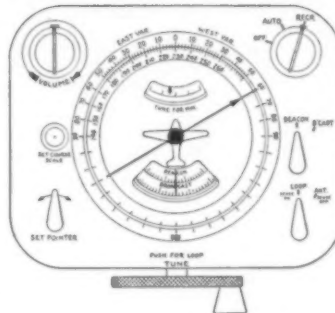


Clinton M. Hester, Administrator of the CAA, is shown being made Chief Okla-Homa-Keturche-Miak-Pochoche or Oklahoma Lucky Whirlwind by Chief Albert Atchonie of the Comanche Indian tribe at luncheon of the Oklahoma City Chamber of Commerce on Oct. 8. Senator Elmer Thomas is at left. The Comanches are the "wildest of all the tribes" and have admitted only a handful of white men to their ranks. Wayne W. Parrish, editor of AMERICAN AVIATION, was made a brave in the tribe with the name Okla-Homa-Yeichey-Douma-Hocho or Flying Thunderbird, and received a tomahawk. That night both Mr. Hester and Mr. Parrish were made Colonels on the staff of Gov. E. W. Marland of Oklahoma. Only the late Wiley Post, Will Rogers and two others had been previously made colonels on the Governor's staff. (Photo from the Daily Oklahoman.)



## American Tests Direction Finder

Above are shown William H. Dum, American Airlines pilot (left), and J. G. Flynn, Jr., superintendent of communications of American, discussing operation of the new Sperry-RCA direction finder, which is installed on a Douglas DST. Flynn is also chairman of the subcommittee for radio direction finding of the radio technical committee for aeronautics. At left is a closeup of the instrument's dial.



## Hester Visits 9 Factories in Month, Gets 1st Hand Experience at Flying

Carrying out his announced plan of spending time "in the field," Clinton M. Hester, CAA Administrator, visited nine aircraft factories in October, conferred with various manufacturers and learned about flying in the cockpits of transport planes in the mid-west and the Far West. In Los Angeles he made a 30-minute flight in the four-engined Douglas DC-4 and in Oklahoma City was made an Indian chief and a colonel on the governor's staff of Oklahoma.

Following a speaking engagement at the feeder mail conference in Kansas City Oct. 7, Mr. Hester flew to Oklahoma City Oct. 8 in a Stinson A transport of the Airline Feeder System of New York City. In the ship were R. T. "Dick" Crane, secretary, and F. W. Wiggin, general manager, of the Airline Feeder System, and Wayne W. Parrish, editor of AMERICAN AVIATION. E. E. Basham, operations manager for AFS, was pilot, with Mr. Hester as co-pilot.

At Oklahoma City Mr. Hester gave a radio talk and was honor guest at a large luncheon sponsored by the Oklahoma City Chamber of Commerce, of which Stanley Draper is executive director. Frank Buttram, chamber president and wealthy oil man, was toastmaster, and Senator Elmer Thomas, chairman of the Senate Committee on Indian Affairs, presided at ceremonies of the Comanche Indian tribe. Mr. Hester was made a chief of the tribe and Mr. Parrish was made a brave.

Later, Mr. Hester was honor guest at a reception arranged by Jerry Sass, well known sportsman pilot and president of the newly organized Trans-Southern Airlines. That night at a special dinner arranged by Mr. Sass and Keith Kahle, editor of Taxi-Strip Magazine, Mr. Hester and Mr. Parrish were made colonels on the governor's staff of Oklahoma.

Flying to Wichita in the AFS Stinson, Mr. Hester spent Sunday after-

noon at the Beech plant with Jack Gaty, sales manager for Beech, and later was the guest of Walter Beech at the latter's home. The following day was spent in visiting the Cessna plant as guest of Dwane Wallace, president; the Stearman plant as guest of J. E. Schaeffer, and Wichita airport as guest of Alfred MacDonald, park commissioner of Wichita. At a luncheon of aviation people of Wichita, Marcellus Murdock, editor and publisher of the *Wichita Eagle* and a pilot in his own right, was toastmaster.

A minor oil break on the Stinson A at Kansas City forced a change of planes and the party continued to St. Louis in a special Douglas DC-2 trip arranged by Crane. Harlan Hull, TWA chief pilot, was in charge of the flight, with Mr. Hester sitting in the co-pilot's seat for the bulk of the trip, during which time he studied the directional beams and other airway aids. At St. Louis as guest of George A. Page, Jr., chief engineer, he visited the Curtiss-Wright plant and inspected the mock-up of the Model 20 twin-engined 30-passenger transport now under construction.

Later in the week Mr. Hester flew to Los Angeles to speak at the national aircraft production meeting of the Society of Automotive Engineers and spent a full day visiting the Douglas, Lockheed, North American and other plants, as well as conferring with manufacturers.

### Lightplanes Aid Airport

Toledo, O., Oct. 12—Toledo municipal airport gross income in the last year reported was \$23,800, of which only about \$4,000 was from United and Marquette airlines, according to Chester Fenton, manager. Private and transient flyers were responsible for the difference, he said. There are 25 private planes here, and an average of 240 transient craft arrives each month.

## EDUCATION CALLED BEST SAFETY CODE

Lederer Asks Federal Agency to Aid New Instructors; Reports on Accidents

Los Angeles, Oct. 15—The need for an agency, probably federal, which would undertake the education of new flying instructors, teaching them the best methods for imparting flying technique, was outlined to the national aircraft production meeting of the Society of Automotive Engineers here by Jerome Lederer, chief engineer of Aero Insurance Underwriters, New York City.

"The most logical and the easiest way for improving the safety record and preventing losses is by education and by disseminating the results of experience," he said. "While generalizations are always dangerous, I should like to venture the thought that safety is achieved more readily by knowing how to operate safely than which we already have than by improvements in design.

"Improvements in design usually make flying easier or make it more useful, thus inducing more people to fly. The mileage flown per accident seems to increase with greater use; hence the indirect influence of improvements on safety records. However, on the basis of number of airplanes per accident, the future seems pessimistic. It must be admitted that the human element creates a greater hazard than the airplane itself.

"An agency for the education of instructors would aid tremendously in promoting good instruction practice, in educating instructors in the finer points of the art, tipping them off on the best way to instruct in various types of ships and informing them where instruction usually fails as indicated by accidents among students."

While pointing out that non-scheduled flying is definitely becoming safer, Mr. Lederer commented that pilot error is still the chief cause of accidents and said that in the typical lightplane accident the airplane is severely damaged but not washed out; the injury to personnel is nil; and the accident occurs while landing or taking off. Engine failure is the second greatest cause of accidents. From the classification of accidents by nature, he said, the deadliness of spins and stalls with or without engine power "is outstanding." This cause was traced to 46% of the light planes that were totally destroyed in 1937 and accounted for 63% of the fatalities.

"It seems that the most outstanding need among lightplanes, and heavier airplanes too, is to design one that will not spin or whip into a dive

### Our Curiosity's Up

Tampa, Fla., Oct. 15—Fred Williams, manager of Peter O. Knight Municipal Airport here, has launched two new aviation organizations for the flying fraternity for which membership requirements are somewhat intriguing, if not very exacting. One unit is known as the T.N.A., with an auxiliary known as the P.G.A. Postal regulations prevent our giving further details. Williams also has a design for a dome shaped control tower which he believes would attract pilots from far and wide and there is nary a local citizen who's been let in on the specifications who would care to deny the attraction.

after stalling or perhaps not stall at all. If such an airplane were used extensively, the accident rate would probably continue to be the same because of the human desire to push a machine to its utmost, but the severity of the accidents would be lessened."

The speaker said more attention should be given to losses of aircraft on the ground from fire or windstorm. While these losses do not involve the safety of life, he said, they do seriously affect the economics of aviation. He presented a series of tables analyzing accidents to light planes during 1937.

### East's Largest Intermediary Field Opens at Martinsburg

Martinsburg, Pa., Oct. 22—Martinsburg Airport, another important link in the state's \$20,000,000 aviation program, was formally dedicated this afternoon. The intermediary field, 18 miles south of Altoona in the most hazardous flying country in Pennsylvania, is said to be the largest port of its class in the East. On the formal program were Gov. George H. Earle, Assistant Postmaster General William Howes, J. Banks Hudson, director of WPA; Jack Frye, president of TWA; Maj. Leslie P. Arnold, vice president of Pennsylvania-Central Airlines; Maj. J. P. Morgan, chief of the airport section of WPA; Col. Cammy Vinet, director of the state Division of Aeronautics, and other prominent aviation figures. The field has two 5,000-ft. runways with clear approaches from all directions, and a new simultaneous radio range station.

### Herb Hucke to CAA

Herbert Hucke, former superintendent of communications for United Air Lines at Chicago, has been appointed to the Air Safety Board of the Civil Aeronautics Authority.

### Highlights of Lederer's L. A. Address

Los Angeles, Oct. 15—Jerome Lederer, chief engineer for Aero Insurance Underwriters, gave the following pertinent facts on safety to the SAE meeting here:

Insurance companies pay out an average of \$2,000 per week for airplanes lost by fire alone.

With less than one-third of the total number of all certificated planes insured, the insurance companies pay out an average of well over \$1,000 a day in aviation claims exclusive of airline claims.

In 1937 there were about 2,000 light planes (1,500 lbs. or less weight) with 592 accidents occurring to these planes, or an accident rate of 30% compared with 20% for all civil airplanes.

The safest class of pilot is the commercial, followed by the private and student. Limited commercial pilots have a poorer record than students. In 1937 limited commercial pilots numbered only about 3% of the total certificated pilots in the country but they accounted for 6% of the light plane accidents.

Engine failure as a cause of accidents is higher than any other cause except pilot error.

## British Visitor



Maj. C. J. Stewart, of the civil research and production departments of the British Air Ministry, shown as he arrived in Los Angeles recently on an American Airlines flagship to study southern California aircraft manufacturing methods. He will confer with members of the Civil Aeronautics Authority soon.

## U. S. Airlines Lead in Safety—Lederer

Scheduled air transportation in the United States is the safest in the world, surpassing by a wide margin the safety records of European airlines, Jerome Lederer, secretary of the aeronautics section of the National Safety Council, told a meeting of the council in Chicago Oct. 12. Mr. Lederer is chief engineer of Aero Insurance Underwriters, New York City.

"It is interesting to note that although in 1936 the U. S. flew about 11,000,000 more miles than the rest of the world, the rest of the world has, nevertheless, been increasing its mileage flown much more rapidly than we have. But on the other hand, U. S. airlines have been increasing the number of passengers carried faster than the others. In fact, in 1934 we carried 69,410 fewer passengers than the other airlines, while in 1935 we carried 25,987 more than the others, and in 1936 we led by 121,874 passengers."

In all safety comparisons, he said, "the very marked superiority shown by U. S. statistics is obvious. There is only one instance in which the best foreign figure is better than the poorest U. S. figure, and the best U. S. figure for miles flown per fatal accident is about three million miles greater than the best corresponding figure for the rest of the world. Our poorest figure is over three and a half million miles greater than the poorest for the rest of the world."

"Another interesting fact is that in 1936 the U. S. airlines flew about two and a half million miles more per fatal accident than they did in 1934, and yet they flew about six hundred thousand miles less per passenger fatality in 1936 than in 1934. This is undoubtedly due to heavier passenger loadings in 1936." Mr. Lederer presented a table showing U. S. and foreign airline statistics for 1934, 1935 and 1936, especially prepared for his report to the council.

### UAL Promotion

The advertising department of United Air Lines has made numerous promotional tie-ups with manufacturers in cooperative advertising, one of these being the maker of juvenile sweatshirts. A half million of these shirts have been sold, each bearing the insignia, "United Air Lines Mainliner" on the front.

## 'Airlines Will Attain Safety of Any Ground Carriers in Few Years'

Los Angeles, Oct. 5—Air transport operations in the United States in the next few years will attain a degree of safety comparable to any other transportation medium, J. A. Herlihy, vice president in charge of operations for United Air Lines, told delegates of the Society of Automotive Engineers assembled here.

Vast progress was reported in airline engineers' training, repair and maintenance, communications, meteorology, pilot training, the constant speed and full feathering propellers, use of oxygen at high altitudes, perfection of recording instruments, engine efficiency and output, automatic pilots, vibration measuring systems, tricycle landing gear, pressure cabins, instrument landing systems and a ground warning device.

The tricycle landing gear "gives every indication that it represents a step forward in the safe operation of transport airplanes," the speaker said, explaining that the nose wheel permits the plane to be placed in contact with the ground safely above the stalling point, permits full use of brakes without fear of nosing over and eliminates the tendency to bounce and ground loop because the center of gravity is ahead of the two main landing wheels. Takeoff is assisted by the position of the plane, which presents low aerodynamic drag from the beginning of motion.

Continued development of pressure cabins is essential "to provide a freedom of altitude selection necessary to the safe operation of airplanes under all circumstances of weather."

"Although the present anti-icing equipment has operated with a fair degree of satisfaction, it cannot be said that it is adequate to permit deliberate and continued operation in any and all icing conditions which may be encountered," Herlihy said. Present methods, however, are expected to provide protection against excessive deposits.

The speaker said that eventually instrument landings will be made "with the same ease, precision and safety that now exists with visual methods." Some tests indicate that, particularly for large planes, precision may be better with the instrument landing than with visual aids. The system, he said, represents one of the "major opportunities for improving safety and regularity of air transport service."

It was said that with additional progress made in the last year or so, it should be possible to modify wing design so as to eliminate the stalling tendency inherent in some planes now operating. Another aid to safety will be the addition of a flight mechanic to the crews of the larger planes who will record and analyze all mechanical data in flight, and relieve the pilots of detecting and correcting mechanical difficulties.

### American Honors Pilots

American Airlines will honor each of its "million-mile" pilots with wrist watches. First to receive the gift was Capt. Walter W. Braznell, first American pilot to reach the million-mile mark and who now has flown over a million and a half miles. Hugh Smith, operations manager, made the presentation in Chicago the other day. Braznell closely followed Col. Charles Lindbergh in flying over the original air mail route between St. Louis and Chicago.



## Mid-Continent Names Operations Chief

Lee E. Bishop has been appointed operations manager of Mid-Continent Airlines, succeeding Vernon A. Dorrell who resigned to join Vega Airplane Co., J. W. Miller, vice president and general manager of the airline, has announced.



Bishop

successively promoted and chief dispatcher. The promotion was effective Oct. 5.

On Feb. 1, 1930 he became chief pilot and general manager for Cardiff and Peacock Flying Service, Fresno, Cal.; joined Century Pacific Airlines Aug. 15, 1931, as a pilot, flying between San Diego and San Francisco; from Nov. 1, 1932, until Oct. 15, 1934, he was a co-pilot and reserve pilot for Western Air Express. In October, 1934, he joined TWA, and a year later went to Braniff Airways.

His aviation service began in the Signal Corps Feb. 3, 1917, at Rockwell Field, where he was assistant non-commissioned officer in charge of flying operations. At the opening of March Field he was appointed to non-commissioned officer in charge of flying operations and received his flying instruction at that time. Until the Armistice he was a flying instructor at March Field. Later he served on border patrol duty as pilot until his discharge Apr. 6, 1920. He, with Major C. Bartholf and Major Ernest Clark, was on the air mail survey between San Francisco and Truxton, Ariz., via Los Angeles, in 1918.

He entered commercial flying with Weilheimer Air Service at Fresno, remaining until June, 1921, when he went to the Sun Maid Raisin Growers of California where he was in charge of the growers contract department. He left that company Feb. 1, 1930, to re-enter flying. He was born in Oakland, Cal., Dec. 22, 1896.

### Camera Plane Takes Hold

Taking a page out of the railroads' success with camera trains, United Air Lines has inaugurated at San Francisco a "camera plane," charging \$3 for a 45-minute flight over Golden Gate, the bay bridges and the site of the 1939 fair. The camera plane experiment is being worked out in conjunction with camera shops. Photo fans were quick to respond to the idea.

### UAL Wants Certificate on 23-Mile Route

The shortest route for which the Civil Aeronautics Authority received application for a certificate of convenience and necessity is thought to be United Air Line's run from Chicago Airport to Curtis-Reynolds Airport, Glenview, Ill., a distance of 23 miles. United operates the route with a Boeing 247-D for the purpose of feeding passengers to its transcontinental system at Chicago. Between May 15 and Aug. 22, 1938, a total of 21 passengers was carried from Chicago to Glenview, and 16 from Glenview to Chicago.

## Mail Pay Increases for TWA on AM2 Proposed by ICC Examiners

C. Edward Leasure and R. J. Bartoo, Interstate Commerce Commission examiners, in a proposed report issued recently, recommended that air mail rates over TWA's route 2, Newark-Los Angeles, should have been 27¢ per mile on a base of 600,000 miles for the period Oct. 1, 1936 to June 30, 1937, and that after the latter date, should have been 30¢ per mile on the same base. TWA, which had been receiving 24¢, asked that the rate be increased to 33 1/3¢, effective Oct. 1, 1936.

TWA pointed out to the I.C.C. that the mail rates now in effect were determined after consideration of operations during the period it held a decided advantage over the other transcontinental airlines. Exhibits submitted by the carrier indicated that beginning in the fall of 1936, when the first of its competitors commenced operations with improved equipment, a steady diversion of traffic to the competitive lines was started. "In addition," the I.C.C. report stated, "since that date the carrier has failed to share in the general upward trend of all domestic air mail carriers with respect to average mail loads carried."

In their conclusion, the examiners stated that the record shows that the carrier's operations were conducted at a profit immediately following the effective date of the present rate. However, a decline in its transcontinental passenger traffic, which began in the fall of 1936, following the installation by one of its competitors of new equipment and improved service, was further accelerated in the spring of 1937 by the acquisition of similar equipment and the inauguration of express schedules by the other transcontinental competitor. In addition, during the same period, the management was faced with the problem of absorbing increased operating expenses and additional tax burdens. Under these circumstances operations have for a considerable period been carried on at a loss. However, deficiencies in earnings alone do not conclusively establish the need for or amount of increase in mail compensation. Furthermore, in the instant case determination of the extent to which such deficiencies are attributable to the mail operations requires the exercise of judgment based on all the evidence of record.

TWA's recorded investment in real property and equipment as of Dec. 31, 1937, was \$6,210,120.79, with depreciation reserve of \$2,452,810.70, leaving a net book value of \$3,757,310.09. Recorded net book value on May 31, 1938, was \$3,680,226.95. Flying equipment in service and maintained in reserve on Dec. 31, last, consisted of 37 planes, of which 17 were DC-2's, 9 DC-3's and 8 DST's. There were 114 engines, of which 112 were Wright Cyclones.

The carrier's books showed a net loss from operations for the system as a whole during the period May 13, 1934, to Dec. 31, 1937, of \$623,821.33. Certain adjustments were recommended to this by the Post Office Department. Between Jan. 1 and May 31, 1938, the books showed a net operating loss of \$821,217.26, which the carrier contends should be adjusted to a deficit of \$880,040.68.

Mail statistics of all domestic air mail carriers, for the period May 1, 1936 to Oct. 31, 1937, prepared from P. O. statements, were submitted by TWA. The exhibit showed that for performing 19,228,360,458 pound-miles of mail service, the carriers received \$19,469,299.44, resulting in an average of \$0.001013 per pound-mile, or \$0.206 per ton-mile. On these bases, the rates received by the carrier (\$0.00661 per pound-mile and \$1.322 per ton-mile) were the lowest of all domestic airlines.

### False Alarm?

CAA members are frankly puzzled by the lethargy of scheduled airline operators in filing petitions for review of rates. The first month in office the CAA heard nothing but pleas for help and reports of impending bankruptcy, but the CAA is powerless to act unless the lines petition for rate reviews. Only two lines, Pan American and Braniff, had applied for reviews up to Oct. 21. There is even a little skepticism expressed—perhaps the emergency financial situation isn't as bad as believed, although airline financial reports are anything but bright.

## Braniff Asks Mail Pay Increase of 5c a Mile On Two of Its Routes

Stating that since May 17, 1934, it has sustained a deficit of \$139,187.19 to earned surplus, and attributing this loss to inadequate mail pay, Braniff Airways on Oct. 20 filed an application with the Civil Aeronautics Authority asking for a flat 5c per mile increase on air mail routes 9 and 15, and an increase of from 55,000 to 110,000 in base mileage on AM9.

AM9 is operated Chicago-Kansas City-Dallas, while AM15 is between Amarillo-Dallas-Galveston-Ft. Worth-Brownsville. On Mar. 28, 1938, the Interstate Commerce Commission granted Braniff an increase of from 28 to 30c on AM9. For the other route, the I.C.C. raised the pay from 27 to 30c per mile for mail carried between Nov. 12, 1935 and July 15, 1937, with base mileage of 64,000 miles. After the latter date, the pay was again lowered to 27c, but the base mileage was increased to 110,000.

During the coming winter months Braniff expects a loss of almost \$60,000.00, and told the C.A.A. that it does not have funds for replacement of necessary equipment. Orders totaling \$100,000.00 have been placed as follows: airway and aircraft radio, \$25,000.00; two Douglas airplanes and engines, \$65,000.00 and miscellaneous, \$10,000.00. These must be paid within four months, the company stated, adding that within six months it will be necessary to replace engines and propellers at a cost of \$105,000.00.

During the fiscal year ended June 30, 1938, Braniff had a net operating loss of \$24,675.74, of which \$21,065.48, it claims, is chargeable to the air mail routes.

"That such air mail route loss was incurred entirely in the transportation of air mails and services connected therewith is established by the fact that the petitioner operated 2,189,019 pay mail-passenger-miles, 190,271 credit mail-passenger-miles, and only 6,091 exclusive passenger-miles on such air mail routes during the said fiscal year and the further fact that 4,736 miles of such exclusive passenger flights would in any event have been necessary in the ferry of equipment for operation of mail schedules," the company's application stated.

### Knight Completes Tour

Jack Knight, veteran United Air Lines pilot who is now educational director for the company, has completed a tour of United's operating bases where he discussed with all pilots their cooperation in the company's sales efforts.

## WAE Veterans



These four Western Air Express pilots, all of Salt Lake City, Utah, have recorded more than 10,000 hours of commercial flying with WAE since leaving the military services. Their total mileage is about 1,000,000. Left to right they are: (top) Ray T. Elsmore, who also is a member of the Utah bar, and Arthur W. Stephenson; below: Franklin Nelson and Henry G. Hohenbeck.

### Hall Replaces Hutchison

Cheyenne, Wyo., Oct. 17—Arthur "Hutch" Hutchison has resigned as United Air Lines passenger agent here to become a flying cadet in the Army Air Corps at Randolph Field, Tex. He is being succeeded by Sid Hall, who for the past year has been employed in the passenger office at UAL at Denver.

### UAL Resumes at Moline

Moline, Ill., Oct. 10—United Air Lines has resumed service from Moline Airport following temporary cancellation of service due to field improvements being made.



Successful air line operations depend day in and day out on the swift execution of planned, accurate flights. And, as airplanes grow larger and more complicated, accurate flight depends more and more on the trustworthiness of instruments.

It is significant that leading air lines all over the world have equipped their finest transports with Sperry instruments.



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## FORTNIGHTLY REVIEW

(Continued from page 1)

which the Congress of the United States has passed to the Interstate Commerce Commission is that it might stagger a commission composed of arch-angels. In proof whereof this writer will venture to offer some statistics drawn from his own experience during over five years as a member of that body. True, he terminated his service eight years ago, but he doubts that the present experience of Commissioners differs much from his own.

"The Commissioners then had at their disposal a total of some 277 working days in each year, omitting Sundays, holidays, etc., the official length of the 'day' being seven and one-half hours, viz., 9 a.m. to 4:30 p.m. Of these, a Commissioner would spend on average the equivalent of at least 77 days 'on the bench' listening to arguments—remainder, say, 200. In the working year there would be a minimum of 40 all-day 'conferences' devoted to routine disposition of cases, petitions, etc.—remainder 160 days. On an average there would be probably a score of special conferences; at half a day average this would bring the remainder to 150 days. Each Commissioner would in those 150 days have to study something like 450 'rate cases' litigated cases, many involving the reading of voluminous briefs and occasionally references to much more voluminous records—and make up his mind how to vote on their disposition. In addition, each Commissioner would have to deal with a multiplicity of other matters committed to the particular division to which he had been assigned. (This meant in the present writer's experience between 400 and 500 'finance cases,' he being a member of Division 4 which dealt with such matters.) And he would have to keep 'open house' in his office for a continuous stream of callers when he was neither on the bench or locked up in conferences. All this exclusive of those important cases which from time to time took him to 'the road' for trial—in 150 days of seven and one-half hours each! And the official reports of the Commission's rate-cases alone run to almost 10,000 printed pages per annum."

## Random Thoughts

**O**CTOBER has been one of the most productive aviation news months for all time. Events of great interest have been occurring with rapidity, whether they pertain to record-breaking carrying of passengers on the airlines or to indications of vast new military orders. In Kansas City took place the first feeder air mail conference and C. R. Mooney, aviation secretary of the Kansas City Chamber of Commerce, is to be highly complimented for his energy and initiative in arranging these meetings. The Civil Aeronautics Authority began hearings late in the month and formally plunged into its duties of economic regulation of air transport. Aviation news developed from the four corners of the globe. Perhaps not the least interesting happening was the series of full-page advertisements which American Airlines carried in newspapers containing a message from C. R. Smith. Those who read that message could not but feel pleased that one airline, at least, has carried into its advertising the tempo and boldness of flying itself. It has always puzzled us why air transportation, which is having so much to do with economic and political life of the world today, has been so backward in its advertising. In its public relations, in its institutional promotion of good will and trade cohesion, air transportation has plowed along in the most unimaginative ruts. C. R. Smith's striking and thought-provoking advertising is an indication that perhaps we shall see more productive messages reaching the public.

## Time to Study Air Express

**R**ECENTLY we have heard a few sub-rosa rumblings of concern about air express. For the past year and a half all air express carried by the scheduled domestic airlines, with a few minor exceptions, has been handled exclusively by the air express division of the Railway Express Agency. The experiment with General Air Express proved rather conclusively that an independent express agency could not exist with one or two lines only. Whatever agency handles air express must cover the entire country and be linked in closely with all of the scheduled lines.

We have been wondering if, as air transportation develops, it is the most healthful condition in the world for the airlines to have their express contracts and express promotion tied in with an agency built up and closely allied with the railroads. Certainly from the promotional angle air express is not getting its fair share of attention. Minds conditioned in railroad methods and procedures cannot easily be adjusted to this new thing known as air transportation—for travel by air involves not only speed but new outlooks, new trade routes, new merchandising and a host of other new and historic features. We are wondering if the airlines will not find it more advantageous in the end to form their own agency, much as they have pooled radio facilities.

Our experience with air express has not evidenced the same alertness to a new form of transportation as have the passenger traffic departments or the air mail. Certain there is little imagination exercised. Figures on air express are strangely not available in many instances. We are glad that a close scrutiny of air express is to be made in the course of time by the Civil Aeronautics Authority for, whatever the outcome, the time has arrived, we believe for a thorough study.

## More Light on Accident Prevention

**I**T IS good to know that the new Air Safety Board of the CAA plans to extend accident analysis far beyond the restricted limits of the routine compilation of statistics by the old Bureau of Air Commerce. Under the supervision of Mr. Jesse Lankford, we may expect some detailed studies of the type that we had always assumed the Bureau was conducting privately. It has recently come to light, however, that there has really been very little analytical work done on accidents and we believe the manufacturers and pilots alike will benefit from more penetrating research. The Safety Board has given Mr. Lankford blanket orders to delve into the whole subject and has provided him with a statistician to aid in his labors.

In this connection Mr. Jerome Lederer, in an exceptionally able paper delivered before the Society of Automotive Engineers at Los Angeles in October, made a suggestion which the Air Safety Board could well heed. He pointed out that the number of airplanes lost by fire or windstorm is unknown because such losses, being outside the official definition of accidents, were not reported to Washington. While a fire loss on the ground may not strictly be an "airplane accident," we believe the Safety Board could well include in its activities the gathering of reports on airplane losses as well as airplane accidents. Air safety could have a broader application than the mere safety of airplanes in flight or in operation. Fire losses have been so heavy (one recent hangar fire alone resulted in a loss of aircraft valued at \$300,000 or the equivalent of \$30 for each civil airplane in this country) that it would appear logical for the Safety Board to devote some attention to the elimination of losses on the ground as well as in the air.

## What Others Say

"There is at present nothing so needed in the field of safety as the removal of pole and wire lines which take away from the normal effective use of our airports. If more pole lines were buried fewer pilots would be."—Gill Robb Wilson, state director of aviation for New Jersey.

"... We trust that at this important point in the history of rotating wing machines the British government will not sit back and let the Americans reap the benefit and future development as they have done with transport airplanes. Obviously all British designers of rotating-wing machines will endeavor to profit by the American offer by the submission of designs through American companies."—*The Aeroplane (British)*.

### Herb Ford Engaged

The engagement of Herbert D. Ford, American Airlines district sales manager at Washington, D. C., and Miss Lucy Gough Sharp, of Washington, has been announced. The wedding will take place in the capital Jan. 14. Ford is a graduate of Tulane University and Miss Sharp has a degree from Holton-Arms School.

### Farmer Sues Pilot

Rockford, Ill., Oct. 21—John R. Heckman, Chicago pilot, is being sued for \$1,000 damages in circuit court here by a local farmer who charges five acres of oats and two acres of barley were ruined after Heckman made a forced landing on the farm last May. Crowds destroyed the crops, Emil Ackerman, the plaintiff, charges.



## Pro, Con and Otherwise

### More on Scrip

New York City, Oct. 6, 1938.

To the Editor:

I happened to read in your Sept. 1 issue a letter written to the editor by Shuyler W. Rogers of Yellowstone Park, Wyo., in which he mentions the "abominable discrimination in fares shown by the major airlines of the country to the users of so-called Scrip." Mr. Rogers then goes on to say, that Scrip is nothing but a charge account, etc., etc.

If Mr. Rogers will investigate, he will discover that this system is not a "charge-account" in the true sense of the word where an item is purchased and the amount carried through to the end of the month at which time payment is expected.

Indeed, this system is just the opposite. An amount of money is deposited with the airline by a company desiring to take advantage of this airline's facilities, and as each trip is made, the amount of the fare is deducted from the deposited amount. In this way, the airline has the use of the money deposited from which to earn interest, and in return for this, it grants the depositor a slight discount on the fare. In no case is credit extended, and as soon as the deposited amount is expended, another deposit must be made or no more trips.

I am not connected with any large company, nor am I an employee of any airline, but I have had occasion to use the Scrip plan.

It gripes me like the devil to hear somebody object to something they know nothing about.

K. T. Barnaby, Jr.

### Job Ahead

Washington, D. C.  
Sept. 14, 1938.

To the Editor:

Your magazine campaigned successfully for a new air law—and we have the long-sought commission backed by more legal power than most folks realize. But you can't expect the Authority or the administrator to create utopia single-handed and so it would seem appropriate for your magazine to say a few good humored words to remind the industry that the job ahead of it is a greater task than that just finished.

The law calls for "an air transportation system properly adopted to the present and future needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense." And what an order that is!

Right now we have a few airlines, many of them being more nearly "hairlines" on the map, carrying a piddling flow of special air mail and passenger traffic. Yet they are capable of providing overnight delivery of letter mail to all of the chief cities and by doing so would get traffic deserving ample pay which never could be labeled "subsidy."

While the breadth of the new act may create a temptation to over-reach, it is a bill of rights on which the industry should stand without fear. Yet fear of the railroads has kept the airlines from even asking for the right to haul part of the first class mail.

"Over-night" mail does not mean "all first class mail by air." But if you set a goal of overnight delivery of letter mail (beginning with the large key centers), then the Post Office can use the cheaper land transportation where it can do the job and turn over

## The Lamp Lighters

(To the Civil Aeronautics Authority)

A bride's Pa-pa made cautious choice  
Of ten sweet virgin maids  
And set them up to serve the bride  
With proper vestal aids  
But five were bored and fell asleep  
And so sleep on for aye  
While five were wise and they are those  
We hope we greet today!

We do not know these chosen names  
For none of us were there,  
To what degree the choice was chaste  
The future will declare,  
It does not state brunette or blond  
Or tall or short or fat,  
It only says the wise made light  
And let it go at that!

They did not rush about the house  
Nor make a play for men,  
They did not kiss the Old Man's foot  
To get the job again,  
They just set out and lit the lamp,  
These virgins who were wise,  
So light could shine from where they sat  
Across the hungry skies!

They did not change the furniture  
Nor stoke the kitchen fire,  
They did not each bring relatives  
They hoped the bride would hire,  
They just set out with patient care  
To keep the light aglow  
And oh, how sweet this parable  
From out the long ago!

GILL ROBB WILSON

## Movement Started to Merge Regional Conferences Into National Council

A movement is under way to form a National Aeronautic Council to provide a unified and strong national organization to coordinate and consolidate all aviation organizations dealing with the public. Among the sponsors are members of the Interstate Airways Committee and William R. Enyart, secretary of the National Aeronautic Association.

According to the plans, the National Aero Council would sum up the ideas of regional planning conferences and be the forum for sentiment that will vitalize the National Aeronautic Association as the one permanent operating organization to see that things are done in aviation that the public wants done.

It is expected that the functions performed by the Interstate Airways Committee during the last Congress will become part of NAA functions

through the new council. Because of his excellent work for IAC and the confidence that members of Congress have in William Redding, executive secretary of IAC, he is prominently mentioned for a place in the new set-up now in flux. Moss Patterson, president of the Southwest Aviation Conference and a member of the IAC executive committee, is mentioned as president of the National Aero Council with Bill Enyart as possible secretary.

Another development is the fast-growing sentiment to draft Major General Mason M. Patrick, former chief of the U. S. Air Service, as an advisory head of the NAA. General Patrick retired in 1927 and is now living in Washington. He is highly regarded as a possible honorary and advisory leader of NAA. Many prominent names are being mentioned for executive officer of NAA.

to the airlines the mail the railroads cannot get to destinations for next morning delivery. The present three cent rate provides ample revenue—and by giving such modern service you will quiet forever those who now howl for a return to the two cent postage. Keep the six cent air mail service for the special quicker-than-overnight letters. The surprising thing about overnight mail by air is that it takes so little revenue away from the dear old railroads.

About airports: the folks in Podunk and Squedunk will put even more money into the town airport if they see it being used. Give them overnight mail—used by all of them instead of "air mail" being used by a few—and you will get all the airport improvement you need. And on that airport, instead of the usual hot dawg stand, you will soon have the swanky retail

shops getting merchandise by air faster than the old department store down near the railroad tracks.

And while you are at it, why not see if a five cent air letter mail rate to South America wouldn't be a better investment than a flock of battleships.

There has been much said about aviation having grown up. Yes, it now has its first pair of long pants and the Air Transport Association has a bigger job in front of it than the Civil Aeronautics Authority. You should give it every encouragement to present its case to the CAA and to the public with all the vigor and unselfish idealism of youth.

And finally, keep in mind "the greatest good to the greatest number" and don't forget the private and miscellaneous operations, even if they do fly to Ireland "by mistake."

Hudson Warren.

## Aero Bookshelf

**HIGH, WIDE AND FRIGHTENED**, by Louise Thaden, *Stackpole Sons*, \$2.00. In her first "solo" Louise Thaden presents a fascinating series of chapters dealing with her experiences in flight from her early beginning to her position as one of the leading girl flyers of the world.

Written in lucid and informative fashion, the book takes the reader through experiences in the air. The winner of the 1936 Bendix race, in which she flew a stock airplane from New York to Los Angeles to win against some of the best pilots in the country, covers all manner of flying experiences, including some of the forced landings and crashes in which she had a part. The book is a material contribution to aviation literature, and one that is a "must" book on any book shelf.

**IMPERIAL AIRWAYS, A survey of its Organization**. Published by Imperial Airways, Ltd., Airway Terminus, London.

Some of the finest aviation photography extant is to be found in this handsomely-produced and printed booklet telling about the 14 years of operations of the British airline. Promotional men of American companies would do well to secure a copy for comparison with our own airline literature. The British volume is much too expensive for general free distribution, but probably has its place in a semi-governmental organization serving a great many countries.

## Obituary

**COL. PERCY VAN NOSTRAND**, Army Air Corps, and military authority on lighter than air craft, died Oct. 15 at March Field, Cal. He was born at Washington, Ia., Aug. 6, 1887, was graduated from Iowa State University, and during the war served at Kelly Field as adjutant until May, 1918. He then began his study of lighter than air craft. He served as executive officer, balloon and airship division, office of the director of the air service in Washington. He inspected the British R-38 in England in 1921, and served also in France and Germany. He took an airship training course at Lakehurst, N. J., and after serving three years in Hawaii, was detailed to Langley Field as instructor of the tactical school. He was a graduate of the Army War College. His widow, Mrs. Lavinia H. Van Nostrand, of March Field, survives.

**CAPT. HERMANN KOEHL**, 50, died in Munich, Germany, Oct. 7. He made the first east-west trans-Atlantic flight with Col. James Fitzmaurice, Irish flyer, and Baron Gunther von Huenefeld in the spring of 1928.

**DOUGLAS S. McELWAIN**, 26, United Air Lines co-pilot and reserve Army officer, died in Sturgis, Mich., Oct. 16 as a result of an automobile accident.

### \$15,000 Fire at Adrian

Adrian, Mich., Oct. 16—An early morning fire at municipal airport today destroyed the hangar, three planes, a motor car, tractor and mowing machine at a loss of about \$15,000. Cause of the fire, which apparently started in the hangar office, is unknown. Ken Morey is airport manager.

# FOREIGN



## Fokker Soars to 37,250 Feet

This Fokker D21, single seat fighter, reached an altitude of 37,250-ft. on Sept. 3 with "a full military load," according to the Fokker Aircraft Works. The plane which was not specially equipped for an unusual flight, was piloted by H. Leegstra. Power plant is a Bristol Mercury VIII 830-hp. engine. The former Dutch altitude record was set by J. R. Wittert van Hoogland on Jan. 18, 1935, with an ascent to 33,400-ft. in a Fokker D17 single seat fighter.

## German Planes Lead Europe, Williams Says

German military aircraft firms are leading all Europe, and possibly the world, in production and the quality of their product, Maj. Al Williams, manager of Gulf Aviation Products, wrote in one of a series of six feature articles which appeared recently in the *Pittsburgh Press* and other Scripps Howard newspapers. He recently returned from an inspection tour of the Continent.

"The British have unlimited means and credit, but are hampered by fumbling and dilatory programs which have put them about two years behind the specified time table . . . I conservatively estimate that Germany is not only producing more finished aircraft per unit of time than the British but is also turning out superior jobs. Every great aircraft manufacturer in the United States had a representative in Germany this summer . . ." Repeatedly, Williams expresses amazement at German attention to detail. Intense research is under way in all types of construction, including plastics, by both Germany and Italy, Williams says.

"A prototype of the German Messerschmitt I flew made a world's speed record for land planes last spring, turning up 239-mph. The Heinkel 112 already has clocked off 394-mph. over an oval course."

## 4th Australian Line Gets Lockheed Planes

The fourth Australian airline to purchase and equip its line with Lockheed transports, will receive its ships shortly and will have them in service by Christmas. The planes left Los Angeles Oct. 17 by steamer. The airline is the MacRobertson-Miller Aviation Corp., Ltd., of Perth, operating the 2500-mile route between Perth and Darwin.

The Planes are Electras, powered with Pratt and Whitney Wasp Jr. engines of 450-hp. each. The contract involved \$117,000. Three other Australian lines, Guinea Airways, Ansett Airlines, and Union Airlines, have Lockheed equipment.

## Lindbergh Decorated

Germany on Oct. 18 bestowed on Col. Charles Lindbergh the Service Cross of the Order of the German Eagle with Star—second highest German decoration.

## GREAT BRITAIN

Diplomacy. *Flight* and *The Aeroplane*, in commenting on Prime Minister Neville Chamberlain's flights to confer with Adolf Hitler, calmly admit the Lockheed 14's were the best planes available.

Said *Flight*: "The Lockheed Electra is a very fast machine and British Airways had one ready. Certain new British types of passenger airplane which are even faster and much more commodious are not yet ready to accept emergency orders."

Said *The Aeroplane*: "The choice of machine for the trip naturally caused some comment in the aeronautical community. Someone remarked that if a British statesman had to go to Germany in an American airplane the crew should have been drafted from various other nations to make a really representative expedition . . . No British landplane airliner is yet in service which could do the job." Lord Runciman flew from Prague to London in a Douglas DC3 of the Czechoslovakian line.

## Special Air Editions

British publications are giving thought to special "air-speed" editions for distribution to subscribers along Imperial Airways' route to the Far East. Imperial reports that *Philatelic Magazine* publishes such a special edition on light weight paper, which is sent air mail.

## Great Britain Gets Huge Export License

State Department licenses issued during September for the export of aeronautical products from the United States reflected Great Britain's huge orders to Lockheed and North American Aviation, that country being granted permission to export \$25,320,469.36 worth of American aircraft. Issuance of the license does not mean that exportation took place in September, but allows Great Britain to take delivery when the planes are completed.

Five other countries were also granted licenses to export aircraft and parts in excess of \$100,000.00. The complete list is as follows:

Great Britain	\$25,320,469.36
China	706,135.00
Argentina	175,347.82
Canada	153,357.30
Australia	123,383.56
Switzerland	117,000.00

The Netherlands Indies and Canada led in the actual exporting of aircraft during September, buying \$888,218.00 and \$462,661.80, respectively. Japan and China, recently the heaviest buyers, fell to 3d and 16th places in the standings. The complete list of all purchases in excess of \$10,000 is as follows:

Netherlands Indies	\$888,218.00
Canada	462,661.80
Japan	368,166.00
Estonia	235,066.00
Great Britain	216,704.00
Brazil	153,566.00
Australia	134,867.00
Mexico	120,900.00
Bolivia	116,000.00
Union of South Africa	69,035.00
Turkey	60,188.00
Netherlands	55,546.34
Germany	50,760.00
Colombia	42,370.00
India	36,067.00
China	21,690.00
Slam	14,856.00
France	13,325.00

Countries buying smaller amounts included Argentina, Costa Rica, Denmark, Tasmania, Trinidad, Russia, Venezuela and Yugoslavia.

## New German Single-Engined Bomber



One of the newest of the German military ships is this Junkers 87, two-seater and single-engined, powered with a Juno 210 Diesel engine producing 660 horsepower. It is able to carry from 500 to 1100 pounds of bomb shells and has two machine guns. Speed and range specifications have not been released. (European Photo Service).

## MORE PASSENGERS ENTER U. S. BY AIR

Plane Traffic Over Borders Into U. S. Gains 13½%; Passengers Increase Almost 18%

The Bureau of Customs in Washington reports that during the fiscal year 1938, ending June 30, 6,639 planes arrived in the United States or its outlying possessions, from foreign countries, or an increase of 13.5% over the 5,851 arrivals during the preceding fiscal year.

Total number of passengers entering this country by plane was 45,847, exceeding the previous year's total by 17.7%. It was the 7th consecutive year of gains for international traffic terminating here.

More than half of the passengers reported arrived in the Florida Customs district, 23,882 clearing at the port of Miami. The Vermont Customs district showed the largest relative gain in the number of planes and passengers, five times as many planes and more than six times as many passengers arriving in that district in 1938 as during the previous fiscal year. The increased traffic at that point was due to the extension of the Boston-Burlington line to Montreal.

The establishment of the New York-Bermuda line in June, 1937, resulted in a large increase in the number of planes and airplane passengers arriving at New York City.

Although fewer planes arrived along the Mexican border than during the previous year, the number of air passengers was 30.1% greater than during fiscal 1937, and three-fifths of these arrived in the San Antonio Customs district at the port of Brownsville.

In 1930 less than three passengers per plane were reported, while in 1938 the average per plane was close to seven, the Bureau stated.

By Customs districts, the 1938 score of traffic arriving by plane follows. First figure indicates number of planes, figure in parentheses indicates number of passengers:

Maine 52 (96); Vermont 559 (1515); St. Lawrence 51 (120); Massachusetts 6 (9); New York 527 (3790); Maryland 68 (558); Rochester 21 (43); Buffalo 233 (491); Ohio 39 (63); Michigan 161 (171); Duluth 10 (19); Dakota 587 (2345); Montana 28 (105); Washington 802 (2840); Northern border total, 3146 (12,168).

Los Angeles 142 (724); San Diego 177 (325); Arizona 33 (56); El Paso 31 (64); San Antonio 449 (4501); Southern border total, 832 (5670).

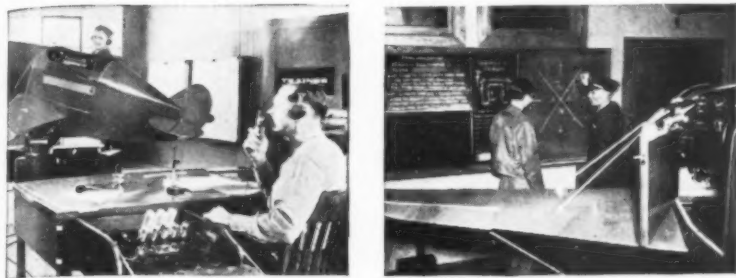
Alaska 580 (1879); Hawaii 50 (276); Puerto Rico 420 (1740); Florida 1611 (24,114); total for these districts, 2661 (28,009).

The Bureau of Customs is under the jurisdiction of the Treasury Department.

## Mercury Flies 6,045 Miles

Although it failed to set a new long distance record, *Mercury*, Britain's upper component of its composite aircraft, is believed to have set a non-stop mileage record for seaplanes with its flight of 6,045 miles from Dundee, Scotland, to Alexander Bay, Orange River, South Africa. Time was 42-hrs. 6-min. with an average speed of 144-mph. The *Mercury* was launched Oct. 6, in command of Capt. D. C. T. Bennett, of Imperial Airways. The previous seaplane distance record was 5,215 miles, held by Germany. Some doubt is expressed as to whether the F.A.I. will certify *Mercury's* performance, considering its aided take-off.





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AIR PILOTING supplies a detailed system of instruction from the beginner's first dual flight with an instructor, his first solo, right on to instrument flying. All flight test maneuvers for the various pilot certificates and all requirements for special ratings are completely analyzed and explained. Diagrams illustrate the various maneuvers and make clear every detail of their correct execution. Radio range layout, methods of orientation, private flyer's use of radio are all thoroughly covered.

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Limited-Commercial Pilot Course. Requirement for higher degree of proficiency in same maneuvers as those in private pilot's flight test. Restrictions and privileges of the limited-commercial pilot rating.

Commercial Pilot Flight Course. Summary of maneuvers in flight test. Possible additions made by inspectors to usual flight test routine. Precision maneuvers recommended for developing highest skill in handling plane near ground, from predetermined exact altitudes. Night flying. How to execute the split-S turn; the chandelle; skyline 8; half roll; barrel roll; loops; falling leaf.

Cross-Country Flying. Map reading. How to lay out a cross-country course. Facilities provided by Federal airways system. Preparation for cross-country flying. A typical cross-country flight with detailed explanation of pilot's procedure.

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Meteorology. Condensed selection of definitions and explanations pertaining to meteorology within scope of examinations given for all ratings above solo pilot.

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Engine Construction, Operation. Radial engines. Terminology and construction. In-row engines. Fuel and ignition systems. Engine requirements. Practical operating procedure.

Blind Flying Instruments. Use of attitude instruments in "instrument flying." Absolute and relative references. Inclination. Pitch, roll, turn indicators. Operating principles of gyroscopic instruments.

Engine Instruments. Construction and operation of tachometers, pressure gauges, thermometers, fuel quantity gauges.

Safety Appliances. Parachutes. Aeronautical communication. Two-way aircraft radio. Night and day operation. Antennas. Shielding. Radio range beacons. Visual, aural indicators. Radio marker beacons.

Aviation Maps and Piloting. Principles of map making. Map projections. Special aviation maps. Rhumb and great circle flying. Use of piloting in aviation. Piloting technique.

Dead Reckoning. Theory. Headings, pointings, courses. Rules for determining courses and headings. Velocity vectors. Velocity triangle for graphical solution of dead reckoning problems. Determining wind while in flight. Aviator's procedure sheet. Radius of action problems. Simple interception problem.

Aviation Instruments. Equipment. Description and operation of aviation instruments. Compass and compass compensating systems. Swinging the compass. Use of card and induction compass in flying. Airspeed indicators; use in aviation. Altimeters. Draft indicators. Group-speed and rate-of-climb indicators.

Atmosphere. Meteorological elements. Temperature, pressure, humidity, evaporation, condensation, precipitation, wind, sunshine, lightning. Cloud forms and visibility. Classification of flying weather. Instruments used to measure meteorological elements. Beaufort scale of wind speeds.

Applied Meteorology. General wind systems. Semi-permanent highs and lows. Wind and pressure gradient. Origin of west winds at high altitudes. Local winds: monsoon, thermal, and chinook winds. Whirlwinds and tornadoes. Turbulent flying. Theories of origins of cyclones and anticyclones. Movements of cyclones. Meteorological services for aeronautics. Special airway weather reports. Pilot's weather report. Interpreting the weather map. Weather forecasting.

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## Welch Producing New Low Priced Lightplane

Welch Aircraft Industries, Fort Wayne, Ind., has started commercial production of its side by side Welch sport monoplane, designed to provide service at lowest initial cost and upkeep. An overhead changeover wheel control is used which gives unobstructed leg room and permits use of a full-sized control wheel. Rudder pedals are dual but the right pedals may be removed easily. A baggage compartment is provided. The tail wheel is steerable. Power plant is a Continental A40-4.

Specifications of model OW5M are announced by the manufacturer as follows: Wing span, 34-ft. 5-in.; length overall, 20-ft. 6-in.; height overall, 6-ft. 7-in.; wing area, 138-sq. ft.; power loading, 20-lbs. per hp.; wing loading, 6.5-lbs. per sq. ft.; empty weight, 515-lbs.; useful load, 435-lbs.; payload, 368-lbs.; gross weight, 950-lbs.; fuel capacity, 10-gal.; oil capacity, 1-gal.; maximum speed, 96-mph.; cruising speed, 85-mph.; landing speed, 29-mph.; rate of climb, 475-ft. per min.; cruising range, 290 miles.

In distributing the planes it is proposed to establish a system of "flying squadrons," each unit composed of 20 students. A qualified pilot-instructor heading each squadron will be furnished a plane which will be paid for out of the proceeds of flying time sold at a reduced rate to squadron members, John Welch, president of the company, announces. Of the proceeds, the pilot will retain 50% as his salary, and deposit the remaining 50% as payment on the plane. The backers believe that by the end of a year the pilot will have his craft paid for. The Welch firm handles all financing and insurance. Arthur L. Stanley, pilot for nine years, has been placed in charge of the first squadron at Mishawaka Airport, near Fort Wayne.

## Wright Supercharger Available for Export

Wright Aeronautical Corp. has announced the release for export sale of the Wright two-speed supercharger and the Chandler-Groves "non-icing" carburetor. Both units have been available to airlines and military services in this country for some time.

The supercharger drive unit was developed by the Wright company in conjunction with the U. S. Army Air Corps to eliminate the performance compromise imposed by a single speed unit. With a supercharger geared at a fixed ratio to the engine speed, high altitude performance can only be obtained at a sacrifice of take-off or vice versa, as the pressures that may be used at sea level without eventual damage to the engine are limited. The Chandler-Groves carburetor was developed to eliminate icing and does away with the necessity for the conventional type of carburetor air heater which adds as much as 30 to 40 lbs. to the weight of an engine.

### 6,000 Feet—1 Minute

St. Louis, Oct. 20—Attracting much attention here is a new Curtiss-Wright Interceptor now undergoing tests which apparently has no equal in the world for climbing and maneuverability. It climbs 6,000-ft. the first minute and reaches 20,000-ft. in 5.9 minutes, by all odds the fastest climbing ship ever produced in this country. It has a 1,000-hp. Wright Cyclone and very small wing spread. It will be entered in Air Corps competitions later.

## United Testing Recording Device To Preserve All Voice Broadcasts

United Air Lines engineers and officials of Recordograph, Inc., Hollywood, Cal., are carrying on experiments with a recording system which ultimately will preserve on inexpensive, indestructible discs every sound that is broadcast by airport or plane traffic crews. Records will be filed for permanent reference and will offer indisputable evidence whenever there is need for verification. So far have engineers developed the device in other fields (business and professional) that absolute identification of an individual's recorded voice can be made by use of an oscillograph.

Tom Stangbye, as superintendent of circuit procedure for United, wrote the manufacturers shortly after he first inspected the device: "It has been my job to investigate every known method of recording and reproducing equipment, and after such an investigation, it is my opinion that your system is not only unique but is the long sought answer to our problem of recording radio telephone communication between airline ground stations and airplanes."

T. R. Gillenwaters, president of Recordograph, Inc., told AMERICAN AVIATION that the firm is convinced the principle is correct, but more work is necessary before the airline recorder is commercially available.

Other types of recorders sold by the company reveal the possibilities to

aviation. Records of 10, 12, and 16-in. diameter are used, each only 1/64 inch thick. The needle travels at a constant speed regardless of its position with reference to the edge or center of the disc. Duplicate recordings can be made for about 5¢ each, so that simultaneously airline officials in various sections of the country could have important records on their desk a few hours after an emergency.

The voice track is indented or spun on the surface, not scratched, so that each disc may be played any number of times without disc deterioration. A 16-in. record as used in commercial Recordographs will, on its two sides, preserve the events of about two hours without interruption.

Each record, and every line on it, is numbered, so that on the playback the needle may be placed exactly on the particular broadcast or time desired. Playback may be instantaneous. A further aid to filing and ready reference is use of various colors for the discs.

No special microphone placement is necessary. Every sound in a room is recorded with equal modulation, and without distortion, whether it be a shout or whisper. Even the frequency which the ground operator dials on his transmitter can be identified in the recording.

The system now sold can be used as a public address system with or without simultaneous operation of the recorder, and telephone conversations can be reproduced on either the loud speaker circuit or the recorder, or both, without physical connection to phone or wire.

### 368-MPH Bomber

Dayton, O., Oct. 15—Wright Field officials are awaiting with interest the Air Corps bomber competitions here next March. One manufacturer who has not heretofore entered the bombing field is constructing a twin-engined job expected to reach 368-mph. top speed at 17,000-ft. and it's no light pursuit job either; it's a full-fledged bomber of somewhat new design.

### NEW 125-HP. LEBLOND

ATC Tests About Nov. 1; Ken Royce Company Formed

Kansas City, Kan., Oct. 15—The Ken Royce Aircraft Engine Co., makers of Leblond aircraft engines, is stepping up its 110 hp. 7 cylinder engine to 125 hp. In addition it will continue to produce the standard 5-cylinder 70 hp. and 90-hp. Leblond engines. The 125-hp. engine should be ready for ATC tests about Nov. 1.

Ken Royce was formed by the Rearwin Airplane Co. as a subsidiary following its purchase of the Leblond aircraft engine company of Cincinnati some time ago. All equipment has been moved to the factory at Fairfax Airport here. William Kimsey, chief engineer of Leblond at Cincinnati, moved here as chief engineer of the new company. Ralph Kriplin, factory superintendent, was also brought here with his same title.

### 2 NEW MILLER PLANES

Twin-Engined Pusher to Be Ready for Tests Shortly

Springfield, Mass., Oct. 21—The HM-4, twin-engined pusher low-wing monoplane being built by Miller Aircraft Co. for Harold Moon, pilot for the Airline Feeder System of New York, will be ready for testing in about a month. A four-place ship, it will be powered with two 125-hp. Menasco Pirates. It has plywood covered wings, fuselage of welded steel tubing, but aside from the pusher design is otherwise of conventional construction.

The Zeta, a side-by-side two-place low-wing monoplane for private-owner and sport flying, has been completed and is to undergo ATC tests after a few minor revisions are made. It is powered with a 125-hp. Menasco Pirate. Howell W. "Pete" Miller is president of the manufacturing company.

### MAC-1 Sold by Miller

The MAC-1 pursuit ship manufactured by the Miller Aircraft Co. of Springfield, Mass., which was destroyed Oct. 3 when one wing was ripped off in a test flight by Earl Ortmon, was the property of Military Aircraft Corp. of New York City, which only recently had purchased the ship. The purchasing company was organized as a sales agency seeking foreign business, with Ed Conerton as one of the officials. A second ship may be built.

### SOLAR NAMES V. P.

A. A. Mathewson, Jr., Promoted to Executive Position and Directorship

Solar Aircraft Co., San Diego, announces the promotion of A. A. Mathewson, Jr., from



Mathewson

sales manager to vice-president in charge of planning, and election to the board of directors. "As sales manager, Mr. Mathewson was in the field for three years and thus became closely associated with our

customers and their needs," Edmund T. Price, president, said.

The new vice-president graduated from the California Institute of Technology in Pasadena in 1933 with a bachelor's degree in mechanical engineering. He joined Solar as a member of the engineering staff, later being transferred to the cost accounting department, and the tool design section where he was assistant superintendent. He became sales manager after serving as assistant to the president.

### Award Service Emblems

Wichita, Kan., Oct. 14—A total of 34 five-year and six 10-year emblems were recently presented to 40 employees of the Stearman Aircraft Division of Boeing Airplane Co. Ten-year veterans are J. E. Schaefer, general manager of Stearman, Cliff Barron, Lewis G. Sinning, G. Dewey Sturham, T. Wayland Babb and Lillian P. Whipple.



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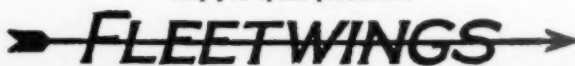
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## Churches Ask Industry to Stop Aircraft Exports for War Uses

Opening Shot in Anti-Export Campaign? One Manufacturer Asks Religious Body if It Favors Having U. S. Make Up Losses

The Federal Council of Churches of Christ in America, with headquarters at 297 Fourth Avenue, New York City, has sent a letter to all concerns registered with the State Department as manufacturers or exporters or importers of arms, ammunition and implements of war asking them if they are now exporting products which would be used in warfare against civilian populations and whether they are negotiating further contracts. With each letter is a copy of a resolution adopted by the council condemning the continued bombing of civilians.

The resolution says in part: "At the same time we are humiliated by the fact that Americans are supplying a substantial portion of the essential war materials which make such outrages possible. We deplore the practice of making profit from the blood and tears of the innocent. To surrender such profit would involve sacrifice by various commercial, financial, labor and transportation interests, and by other sections of the population. But we urge that such sacrifice be made, for it would go a long way toward restoring a sense of morality in international affairs."

The accompanying letter, signed by Walter W. Van Kirk, secretary of the department of international justice and goodwill, concludes with the following:

### Asks Sacrifice

"I am well aware of the fact that to forego such trade would involve sacrifice not only on the part of manufacturers and corporations but also on the part of labor in the industries directly involved and also all who derive profit indirectly from transportation and the many related industries and enterprises. The public generally would pay. Would it not be very wholesome for some outstanding leaders in American business life to take the initiative in the voluntary surrender of such profit?"

Whether this is an opening shot of a substantial campaign on the part of the Federal Council of Churches to restrict exports of aircraft and accessories is not known, but it is evidence of the anti-export feeling pointed out in a recent editorial in this magazine.

One aircraft manufacturer replied to the council that he was not exporting at present, but intended to do so in the near future "in accordance of course with the rules and regulations of the U. S. Department of State." He went on to point out "certain facts which are not known to you or your associates" concerning exports.

"Our American aircraft industry is a comparatively small and struggling one, and I am sure there are few if any other industries in the United States which contain so few mercenary individuals and so many men who are interested almost to the point of being fanatics in their work and in the successful culmination of their dreams of American aviation development," this manufacturer replied. "Many of these men have experienced war at first hand and deplore it much more greatly than those who have not had this opportunity."

"Aircraft development proceeds with rapidity not known in any other form of business. Aircraft, particularly military aircraft, are obsolete from the day they begin to fly as further discoveries and improvements have been made. This applies also to foreign aircraft development as well as American. Foreign nations are pouring huge sums into the

development and procurement of aircraft. Our expenditures in this country for national defense purposes have been relatively small, but due to the fact that foreign nations have seen fit to take advantage of the ingenuity of our American engineers our aircraft industry has been supplied with the means of continuing development of newer and better aircraft for our own national defense purposes but at the expense of foreign nations.

### Keeps Control Here

"In this way we are keeping pace with them at much less cost to our country. We are building sources of supply for our national defense at the expense of foreign nations. We are keeping sources of supply in this country which might otherwise be built up by other nations for use against us. We are keeping control of these sources of supply so that they can be cut off at any time from foreign nations which might attack us thereby seriously crippling them.

"If the ability of our country to maintain this situation is taken away the results are certain. There will be no decrease in the war outrages taking place abroad—the foreign nations will simply obtain their equipment elsewhere. We thereby lose our first objective—to eliminate these outrages.

"We also lose our ability to maintain pace with military aircraft development abroad unless we supply greatly increased funds on the part of our Federal government to replace the foreign expenditures so lost.

"We also lose our ability to shut off in one day the source of supply of any warring nation abroad to whom we have been furnishing aircraft, and thereby crippling it for a considerable period of time.

## I. C. C. Grants Hanford Increases in Mail Pay, Base Mileage on AM26

The Interstate Commerce Commission recently granted Hanford Airlines a base rate increase from 32¢ to 33 1/3¢ per mile and an increase of from 50,000 to 67,000 in base mileage on AM26, Minneapolis-Omaha-Tulsa-Bismarck-Huron. The increases are retroactive to Nov. 22, 1937.

Since the establishment of the 32¢ rate on July 1, 1936, extensions have increased the route distance from 848 to 1,114 miles. At the time the rate was fixed, the route, with a base mileage of 50,000, came under the 180% classification, i.e., a route over which the base is substantially the monthly equivalent of one round trip daily. On such a route, according to the I.C.C. sliding scale, mail pay is reduced one cent for each 10% increase in miles flown over the 180%. Due to the additional mail-passenger schedules authorized, the total monthly mileage is 95,297, which results in a pay reduction for Hanford.

Hanford stated that its net loss for the fiscal year 1937 was \$106,660. and for the seven months ended Jan. 31, 1938, was \$69,838, making a total deficit of \$176,498. Recorded investment in real property and equipment on Jan. 31, 1938, was \$263,123, less accrued depreciation of \$90,785, or a net book value of \$172,338. Current and accrued assets were \$97,476 and current and accrued liabilities, \$25,434. Net book value of investment in planes and engines on the same date was \$124,386.

## Publicity Chief

James F. Rowe, recently was appointed director of public relations for Western Air Express. Active in newspaper and public relations circles for ten years, Rowe will make his headquarters in Los Angeles. He was recently associated with the publicity department of RKO Radio studios in Hollywood.



"After consideration of the above facts I would ask if you do not agree with me that if we are going to eliminate what amounts at present to vital economic support of the American aircraft industry (even though this support may come from abroad) that we replace this loss by sufficiently increased U. S. Government purchases to insure the maintenance and development of our American aircraft industry and thereby supply ourselves with the necessary protection of our National Defense Resources."

## Army Air Corps Installs 'Eyebrows' on Its BT-9's

The Army Air Corps is installing "eyebrow" slots on the wings of its North American BT-9 airplanes in order to give the craft more lateral control at speeds bordering on stalls.

The slots, which are of the fixed type, as contrasted with those which go into operation when approaching a stall, are attached to the leading edge of each wing, directly in front of the ailerons. Their function, according to the *Air Corps News Letter*, "is to permit a smooth flow of air across the ailerons at low speeds, thus aiding in the more rapid recovery from stalls and potential spins."

## AL NEAR NEW HEAD OF AIR RESERVES

Brintnall Merchant Elected Senior V. P.; May Move Headquarters to Washington

A total of 150 members from nine corps areas attended the eighth annual meeting of the Air Reserve Association of the United States at Dayton, Ohio on Sept. 14-17, and elected officers, adopted four important resolutions, tentatively selected New York City for its 1939 meeting, and voted to consider transferring its national headquarters to Washington.

Lieut. Albert H. Near, of Bowman Field, Louisville, Ky., was elected national president, succeeding Major William C. Lewis, of Kansas City. Other new officers include Capt. Brintnall H. Merchant, 3722 Warren St., N. W., Washington, D. C. senior vice-president; Major John W. Ranson, 5640 Swope Parkway, Kansas City, Mo.; second vice-president; Major William L. Plummer, Oliver Building, Atlanta, Ga., national secretary; Capt. Lawrence J. Eyer, 201 Oakwood Manor, Dayton, Ohio, national treasurer, and Capt. Miller B. Towman, 1711 Kenneth Road, Glendale, Calif., judge advocate.

The convention adopted the following resolutions:

To extend the cross-country radius for inactive duty flying from 350 to 500 miles, and to 1,000 miles for active duty flying.

To urge legislation granting year-round training pay for the risk involved in flying duty.

To provide Reserve representation on the board which selects new aircraft types to be purchased for the Air Reserve.

To press Congress for clarification of H. R. 2887, so that disability and death benefits provided therein definitely apply to all official duty, whether performed on active or inactive status.

Clarification of H. R. 2887, which passed Congress, is desired so that pensions will be available to widows of flyers killed while on inactive duty. Although Air Reserve members feel that the bill as passed clearly provides this, the pensions have not been available because of the method in which War Department and Veteran's Bureau attorneys have interpreted the law.

A report given by Major William F. Centner, past executive officer, who is now an aircraft accident investigator for the Civil Aeronautics Authority, showed that the Association has over 1,500 members enrolled, which represents almost all of the active flyers holding Army Reserve commissions.

In voting to consider transferring national headquarters from Dayton to Washington, the Association decided to leave the matter in the hands of the incoming officers.

Each one of the 150 members present flew to the convention, a total of about 50 planes being gathered at Wright Field. Members were present from New York, Boston, Washington, Atlanta, Cincinnati, Louisville, Pittsburgh, Chicago, Oklahoma City, San Antonio, Dallas, Los Angeles, San Diego, San Francisco, Seattle, Portland, Kansas City and Honolulu.

## Discontinue Northrop Name

Los Angeles, Oct. 15—Douglas Aircraft Co., Inc., has announced that the name of the Northrop Division of Douglas hereafter will be designated the El Segundo Division, but all products turned out at the old Northrop plant near Municipal Airport will be called Douglas craft. Backlog of Douglas on Sept. 30 was estimated at \$25,179,290.75. September deliveries were: commercial transports, \$296,000; U. S. Army, \$541,000; U. S. Navy, \$100,000.

## DEEDS HEADS NEW CHANDLER-EVANS

Resigns From United Aircraft Corp. to Join Detroit Aircraft Accessory Organization

Charles W. Deeds has resigned as vice-president and director of United Aircraft Corp., and as general manager of Pratt & Whitney Aircraft Division, to assume presidency of the Chandler-Evans Corp., manufacturers of aircraft carburetors and fuel pumps, and dealers in aircraft accessories.

The new corporation, which has opened offices at 2200 8th St., Detroit, has announced the following officers: M. E. Chandler, vice-president in charge of engineering; W. B. Groves, vice-president in charge of sales; M. E. Stover, treasurer; Prewitt Semmes, secretary; E. J. Hill, vice-president in charge of the fuel pump department.

E. S. Evans, Sr., president of the Evans Products Co., is chairman of the board. Other directors are E. S. Evans, Jr., vice-president of Evans Products Co.; Frank Russell, vice-president of National Aviation Corp.; E. O. McDonnell, president of National Aviation Corp.; H. R. Powell, of G. M.-P. Murphy Co.; George M. Gillies, Jr., Adams Express Co.; C. W. Deeds, M. E. Chandler, and W. B. Groves. Capitalization now is \$200,000. All stock is held within the board of directors and National Aviation Corp.

The new corporation has acquired all patents covering the carburetor, said to be the only non-icing model in service, and will start deliveries early this month. An initial order has already been received from Wright Aeronautical Corp. Also acquired is the fuel pump division of the Evans Appliance Co., an Evans Products affiliate, which will manufacture a complete line of aircraft and Diesel fuel pumps, some of which are now in production for the government.

Mr. Chandler and Mr. Groves started in the carburetor business about 15 years ago with Stromberg Co., Chicago, and when that firm was absorbed by Bendix Aviation Co., they were appointed respectively general manager and sales manager. In 1934 they resigned to form the Chandler Groves Co., which manufactured the carburetor now in general use on Wright Cyclone engines, and which was used on the Hughes world flight.

Mr. Deeds joined Pratt & Whitney in 1926 as treasurer and director. During 1934 and 1935 he was president of United Aircraft Exports Corp. He is a graduate of Harvard School of Business Administration. Donald L. Brown, president of United Aircraft Corp., in a statement released Oct. 13 paid tribute to Mr. Deeds' ability as an executive.

### Wings, Ltd. Profit

Winnipeg, Manitoba, Oct. 12—Wings, Ltd., reports carrying 6,611 passengers in the year ending May 31, with freight poundage for the period at 2,725,608 and mail poundage of 31,564. Operating revenue was \$214,460.60 and operating profit was \$913.33. Nine planes were operating, according to the company's annual report. In March contracts were received for mail service from Winnipeg to the Central Manitoba area and from Winnipeg to Red Lake. "It might be pointed out that while the Dominion government appears to have a well defined policy in respect to the support to be given Trans-Canada Air Lines and connecting operations, no such policy has yet been developed in respect to 'bush' services," says the report.

## BUSINESS AND FINANCE

### Three Firms Meeting Demand For Highest Test Gasoline, Fourth to Start Production Soon

Construction of refining units for commercial production of 100-octane gasoline, in increasing demand by the aviation industry, has been completed by at least three national refining companies, and a fourth company will start operation shortly, according to reports to AMERICAN AVIATION. Because of the complicated and costly process involved, output quantity in the past has fallen short of requirements.

Standard Oil Co., of California has operated extensive refining equipment for producing iso-octane base stock for almost a year, according to R. F. Bradley, manager of the company's aviation division. About \$3,000,000 was spent on research and construction of the two separate plants required.

Phillips Petroleum Co. is now manufacturing the fuel and will govern its output by future demand, A. H. Hughes, vice-president, pointed out.

Gulf Oil Corp. has recently placed in operation a polymerization and hydrogenation plant at its Port Arthur refinery which represents the latest advances in refining research. Pure Oil Co. reports two years of experimentation and development have paved the way for its high octane producing equipment which will be ready soon, according to D. H. Young, of the aviation department.

"The need of a premium grade of fuel for the airplane is greater than in any other industry because the amount of payload depends directly upon the quality of fuel used," L. O. Crockett and Ernest Cotton of Gulf, write. "The great modern airliners would be unable to carry any payload at all if required to use ordinary automotive gasoline. The use of 100 octane fuel in an airplane engine designed to use this premium will increase the power output for take-off by as much as 30% over the usual 87-octane gasoline and will decrease consumption during flight by 10% to 15%.

"The greatly increased power available when using 100 octane number gasoline and the lesser weight of the fuel obviously result in much greater safety in operation together with greatly increased payload. The magnitude of this increase best can be appreciated from the generally accepted statement that the operators of the *China Clipper* could afford to pay \$1.14 more per gallon for 100-octane gasoline than for that with an 87-octane rating."

Iso-octane, in its purest state, may be used as a motor fuel, or in various blends to improve quality of a lower octane fuel, or its blends may be treated with tetraethyl lead fluid to produce motor fuels of still higher octane, the Gulf researchers report.

### Ryan Profit \$31,451

San Diego, Cal., Oct. 17—Ryan Aeronautical Co. and its wholly owned subsidiary, Ryan School of Aeronautics, report a net profit for the first eight months of 1938 of \$31,451.34, as against \$18,995.94 for the entire year of 1937. This is about 11.3¢ a share for the 269,650 shares outstanding. Backlog is about \$360,000. Total assets are \$472,282.38, of which \$259,397.22 represents current assets. A contract with the Guatemalan government for six STM military trainers costing about \$50,000 has been announced.

### Grumman Deliveries

#### Total 97 For Year

Grumman Aircraft Engineering Corp., Bethpage, N. Y., up to Sept. 30 had delivered 97 planes this year, of which 88 went to the Navy. Company employment on that date stood at 635, including officers and an engineering staff of 33, according to a new prospectus filed with the Securities & Exchange Commission Oct. 17.

Whereas 431,865 shares of \$1 par value common stock were outstanding Dec. 31, there were 468,060 shares publicly outstanding on June 30. Total authorization is 600,000 shares.

Total assets on June 30 were \$1,891,771.72 of which current assets accounted for \$1,520,074.18. Cash totaled \$384,751.39; accounts receivable—trade, totaled \$246,815.48; inventories were \$887,023.11; other current assets were \$1,484.20. Fixed assets included property, plant and equipment (at cost): \$374,439.48, less depreciation reserve of \$40,799.37. Patents were listed at \$1. Deferred charges were \$32,349.78; other assets were \$5,706.65. Current liabilities were \$327,996.31; accounts payable—trade, were \$213,416.65; other current liabilities were \$6,478.00; salaries and wages were \$6,163.47. Capital surplus was \$622,910.69, and earned surplus was \$159,568.07.

For the six months ending June 30, 1938, gross sales were \$1,275,345.22, and net income was \$183,864.43. For the year ending Dec. 31, 1937, net income was \$139,061.56.

On Oct. 1 the company held the following contracts:

(1) Navy for 15 amphibians, for about \$550,000. Five were delivered in September and the balance will be delivered by year end. (2) Navy for 27 single seat fighters, for about \$600,000. Now in process. Deliveries will be completed early in the summer of 1939. (3) Navy for one experimental single seat fighter (model XF5P-1) to be completed next summer; cost not stated. (4) Navy for 20 additional amphibians costing about \$750,000. To be delivered next spring. (5) Army for 26 twin engine amphibians, costing about \$1,400,000. To be completed next spring.

Deliveries up to Sept. 30, 1938, for the year, included 66 model F3F-2 planes (Navy); one X13F-1 (Navy); 15 I2F-2 (Navy); 5 J2F-2 (Navy); 1 XF4F-2 (Navy); 1 G32 (commercial); 8 G21 (commercial). Backlog on June 30 was \$3,750,000. Approximately 25% of the company's business now is the manufacture and sale of spare parts, it is reported. In 1937 the firm sold design rights in Canada for its model FF-1, and sold to the purchaser 51 fuselages for this type under a separate contract for \$296,000. Deliveries were completed early in 1938. A storage and processing building of 5,600-sq. ft. was completed about Oct. 1.

L. R. Grumman, president and director, on Oct. 1, 1938, owned of record and beneficially 134,160 shares, or 28.632%; L. A. Swirlbul, vice-president, assistant secretary and director, owned 56,500 shares or 12.058%.

### Swedes Push Manufacturing

Two Swedish aircraft manufacturers are negotiating with American firms in an effort to acquire licenses for rights in that country, according to the automotive-aeronautics trade division of the Bureau of Foreign and Domestic Commerce. Two other concerns already hold patent rights for American, German and English craft, and plan mass production.

### British Place Parts Order of \$3,900,000 with Lockheed Corp.

Burbank, Cal., Oct. 11—Lockheed Aircraft Corp. yesterday signed with the British Air Ministry for the largest spare parts order ever received by the company, totalling \$3,900,000. This complements the orders received last June from the British for 200 reconnaissance bombers costing about \$18,000,000. Lockheed's backlog is now about \$24,000,000. Some of the parts order was included but not publicly announced in the backlog figure as of June 30.

Other orders to be filled by the company include 13 twin-engine personnel transports for the Army, a \$690,000 order for the Netherlands East Indian government, and planes for the Navy, a Yugoslavian line, British Airways, "and several unannounced individuals and corporations." The first ship for the War Department has been delivered to Dayton, and all 13 will be delivered by year end.

"It is expected that improvement of factory facilities and production methods effected this year will enable Lockheed to complete and deliver an average of one plane per working day during 1939," said Robert E. Gross, president.

### SOLAR OPENS OFFICE

W. K. Wheeler Placed in Charge of Eastern Branch in New York

Reversing the usual order by which eastern aviation companies have opened



Wheeler

up west coast offices, the Solar Aircraft Co., of San Diego, Cal., has opened an eastern sales office at 60 East 42d St., New York City, with W. K. Wheeler as eastern sales representative.

In announcing the new office, Edmund T.

Price, president of Solar, said that Mr. Wheeler will contact eastern manufacturers and government bureaus to provide better and quicker service between eastern customers and the west coast factory. Mr. Wheeler was one of Solar's original employees, joining the company in 1931. He became welding foreman in 1933 and factory superintendent in June, 1936, which position he left to establish the New York office.

### Solar Declares Dividend; Sales Up 95% Over 1937

Solar Aircraft Co., San Diego, declared a 5% quarterly dividend on its \$1 common capital stock of record Oct. 1 and payable Oct. 10. Net sales for the first 20 weeks of the current fiscal year, ended Sept. 17, were \$281,048.47, an all time high. This is a 95% increase over sales of the same period of 1937. Net profits, after provision for federal taxes, for the 1938 period were \$31,577.32, equal to 23.8¢ per share earned on 132,650 shares of common capital stock, or an increase of 123% over the first 20 weeks of the last fiscal year.

### Fairechild Unfilled Orders

Fairechild Aviation Corp. reports unfilled orders as of Aug. 31, 1938, of \$1,353,224, compared with \$1,245,251 a year ago, and \$1,363,738 on Dec. 31, 1937.



## Fairchild Gets Voting Control of Taylor-Young Airplane Co.

Richard Depew, Jr., Made Vice-President and General Manager; Action Gives Taylorcraft Company New Working Capital and Bigger Market

Alliance, O., Oct. 19—A controlling block of stock in Taylor-Young Airplane Co. was placed in a voting trust today, allying the concern closely with Fairchild Aviation Corp. For some time Fairchild has been exclusive export agent for Taylorcraft.

The new alliance gives Taylor-Young new working capital which is expected

to accelerate production and place the company in a much stronger position in the industry. It also gives Taylor-Young a new vice president and general manager, Richard H. Depew, Jr., well known in the industry and a partner in Havens and Depew, Fairchild distributors of Roosevelt Field, Inc. The announcement was made by C. G. Taylor, president of Taylor-Young, following a meeting of the board of directors at Alliance.

Mr. Depew was elected to the board of directors, as was also C. A. Harrison, of New York. They succeeded Thomas F. Lee, of New York and Toronto, and F. A. Mayfield, of Akron, O.

In addition, the new board of directors consists of Mr. Taylor, pioneer designer and builder of light aircraft, who continues as president; A. J. Hoiles and A. A. Mulac, of Alliance, O.; F. L. Wehrhan, of New York City; D. C. Van Pelt, of the Service Steel Company, Detroit, Mich.; and Morton Graham, attorney, of Erie, Pa.

A controlling block of the Taylor-Young stock has been placed in a voting trust, of which the voting trustees are Mr. Wehrhan, Mr. Harrison, and J. S. Ogsbury, president of Fairchild Aviation Corp.

"The activities of the company during the coming year will be concentrated particularly on the production of its new 50 horsepower Taylorcraft monoplane", the announcement said. "Although but recently announced, this model has already attracted a large number of orders, which are being filled as rapidly as possible. General plans for the future call for an aggressive sales campaign both in this country and abroad. Advance indications point to 1939 as far exceeding 1938 in point of production and sales."

The new general manager of the company, Dick Depew, has been in aviation since 1911 when he learned to fly and secured his first pilot's license in France. He maintains an active transport license. He joined the Curtiss Aeroplane Co. before the war and later became test pilot for the company. During the war he was test pilot at McCook Field at Dayton, O.

Returning to the Curtiss Company after the war, he was successively manager of the Curtiss Aviation School and field manager in charge of opera-

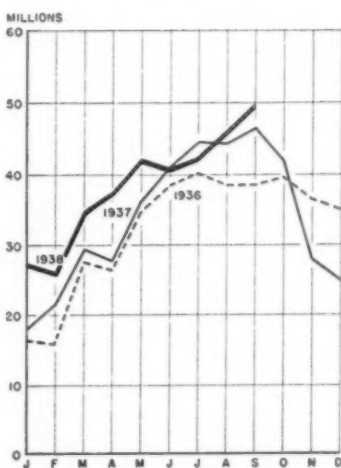
tions from 1919 to 1922, following which he became Argentine manager for the Curtiss Airplane Export Corp. at Buenos Aires. He joined the Fairchild organization in 1923 and was with this company in various capacities until 1931. He helped design, and made the first flight with, the first Fairchild monoplane in 1926. From 1931 to 1932 he was sales engineer for American Airplane and Engine Corp., a subsidiary of Aviation Corp., and since 1934 he has been in partnership with Beckwith Havens, another aviation pioneer, as the successful distributor of Fairchilds in New England and surrounding territory. During the past two years Havens and Depew have accounted for one-third of the total Fairchild sales.

C. A. Harrison, the other newly elected member of the board, is vice-president of Fairchild Aviation, Inc., export organization of the Fairchild companies. He is a graduate of Massachusetts Institute of Technology and has been associated with Fairchild since 1928. He has held the position of vice-president since April, 1936.

## September Revenue Mileage Sets Record

September was the best month in the history of the U. S. air transport industry, with an all time record of 49,480,616 revenue passenger miles reported by the Air Transport Association of America Oct. 19. This total was 7.4% over August, 1938, and 4.9% over September, 1937. The first 9-months total of 345,906,887 revenue passenger miles (also a new high) is 11.3% over the 310,744,749 for the same period of 1937.

### REVENUE PASSENGER MILES FLOWN



### Johnson Co. Receivership

Dayton O., Oct. 18—Jack Werst has been named receiver for Johnson Airplane Supply Co. here following a suit filed by the Zimalert Co., Jersey City, N. J., which asserts the defendant owes it \$2,500. Appraisers are F. E. Krehbiel, John Bonner, and Fred Krumholtz.

## Director



LaMotte T. Cohu prominent in New York financial circles, who is a director of Transcontinental & Western Air, Inc.

## Nat'l Aviation Corp.

### Net Loss is \$294,583

A nine months report for National Aviation Corp. reveals net loss of \$294,583, including \$310,867 net loss on sale of securities on the basis of average cost and after deducting expenses and taxes. In the corresponding period of 1937 (ending Sept. 30) there was a net profit of \$162,641, including a net profit of \$142,836 on sale of securities. Capital stock outstanding totals 477,274 no-par shares.

Total assets as of Sept. 30 were \$6,332,015, comparing with \$6,664,611 a year before. Cash was \$563,935, comparing with \$144,948 a year ago. Paid in surplus is reported as \$4,236,299 and deficit from operations since Jan. 1, 1938, was \$295,323. Investment in airport subsidiaries are carried at \$1,485,149 and investment in National Aviation Research Corp. at \$50,000. An indicated liquidating value of \$12.92 per share is shown, based on market value for stocks with an active market, estimated value for stocks with an inactive market, and cost for investment in controlled corporations, after allowance for estimated federal income taxes on unrealized appreciation (based on tax cost) of securities held.

### PCA Profit \$27,229

Pennsylvania-Central Airlines will show a net profit of \$27,229 for the quarter ending Sept. 30, 1938, which will reduce the net loss for the preceding nine months of 1938 to \$15,876. C. Bedell Monro, president, has announced. This compares with a net loss of \$107,443 in the first nine months of 1937. Revenues for the first three quarters of 1938 were up 14.3% over the same period last year. Route mileage on Sept. 30, 1937 was 862, as compared with 2,089 miles today.

### French Purchases Seen

Los Angeles, Oct. 15—Thirty planes will be bought by the French government from unannounced Southern California manufacturers, according to M. Touret and H. Varlin, of the French air ministry, visiting here to study American methods.

## Aero Securities Sets New Offering Price

Aeronautical Securities, Inc., on Sept. 19 had issued 5,175 shares of common stock and total capital and paid in surplus was \$35,699.50, the corporation reported to the Securities & Exchange Commission Oct. 12. Aeronautical Securities Research Corp. has purchased 300 shares at \$6.90 a share. The firm was organized Apr. 30, 1938. Authorized capital is 300,000 shares of common stock, \$1 par value.

Remaining shares will be offered at a price equal to the amount which an outstanding share of common stock would receive if the net value of the assets of the issuer were distributed among its stockholders, plus a commission or spread not in excess of 8% of the retail offering price to the public. This is provided that a reduction in such commission may be allowed upon any purchase of shares at an aggregate price in the amount of \$25,000 or more by any one purchaser, or upon any purchase of such shares resulting from the reinvestment of cash dividends by the stockholder. The offering price would be calculated at the end of each business day, to be in effect through the next business day of the New York Stock Exchange and to the second day's opening.

Dealers will give their customers the same offering price, except for dealers' discounts. Any stockholder may redeem his shares at any time, usually under 7 days.

Not more than 10% of the value of the company's assets may be invested in securities of any one company, and not more than 20% may be put in securities not listed or admitted to trading privileges on the New York Stock or Curb Exchanges, the SEC is informed. Aeronautical Securities Research Corp. recommends securities for the portfolio, receiving a quarterly fee of 1/4 of 1% of the value of Aero Securities, net assets. It is also revealed that Aeronautical Securities can not borrow more than 10% of the value of its assets without approval of stockholders, and can not make a short sale. Each shareholder is entitled to one vote per share, and dividends when and as declared. There are no preferences, conversions or exchange rights. Total net proceeds to be invested will be approximately \$2,070,000.

On Aug. 31 assets were \$34,713.07, which included securities at market quotations totaling \$23,746.88; cash in demand deposits, \$9,413.34; deferred charges \$80.12; organization expenses \$1,472.73.

Investments on Aug. 31 included: Air Associates, Inc. (cost of \$2,014.50); Fairchild Aviation Corp. (\$1,324.04); Douglas Aircraft Co., Inc. (\$2,444.25); Grumman Aircraft Engineering Corp. (\$1,802.25); Lockheed Aircraft Corp. (\$2,928.00); Glenn L. Martin Co. (\$2,960.43); Pan American Airways Corp. (\$1,489.00); Pollak Manufacturing Co. (\$1,256.25); Sperry Corp. (\$3,101.05); United Aircraft Corp. (\$2,777.50); and preferred stock, Curtiss Wright \$1 non cumulative class A. (\$2,897.93). Total per balance sheet, \$24,995.20.

J. E. Arrowsmith has been appointed a director. Names of other officials and directors were published in AMERICAN AVIATION July 1. Offices, also those of Aeronautical Securities Research Corp., are at 15 Exchange Place, Jersey City, N. J.

### Eclipse Moves to Bendix

Bendix, N. J., Oct. 25—Eclipse Aviation Corp., a division of Bendix Aviation Corp., moved today to its new offices and factory here from its old quarters in Orange, N. J. Company officials said enlargement of manufacturing facilities "is in keeping with the progress of the aviation industry."

## Herberts Engineering Corp. Succeeded By Aircraft Components, Incorporated

Vernon, Cal., Manufacturer of Hydraulic Assemblies to Increase Research Activities; Board Has Officials and Directors of Douglas, Vultee, Lockheed, Consair, Menasco

Herberts Engineering Corp. will be dissolved and succeeded by Aircraft Components, Inc., Vernon, Cal., according to information in a registration statement filed with the Securities & Exchange Commission on Oct. 20. It is the plan to issue 20,440 shares of common stock, \$5 par value, to Herberts stockholders in a share for share exchange plan. Provision also is made for offering a maximum of 17,560 additional shares to underwriters at \$9 a share for sale at \$10, the exact total to be purchased by underwriters being undecided. Herberts Engineering Corp. was incorporated Feb. 7, 1938. The new group will continue to manufacture and machine hydraulic assemblies for sale to aircraft manufacturers.

Heading the new organization are the following:

C. A. Herberts, president and director, who was president of Herberts Engineering, and who will remain president of Herberts Machinery Co., a separate firm manufacturing small woodworking machinery.

Charles T. Leigh, vice-president and director, who is also vice-president and a director of Consolidated Aircraft Corp., and director of Garrett Supply Co. He was vice-president and a director of the old Herberts company.

R. J. Wig, secretary-treasurer, who is vice-president of Kelco Co., vice-president of Fitger California Co., vice-president of Frosted Wool Process Co., and a director of Douglas Aircraft Co., Inc. Since July 18 he has been a member of the board of directors and on the executive council of Herberts Engineering.

L. A. Cole, assistant secretary and director, assistant secretary of the old firm.

F. W. Conant, director, is assistant general manager of Douglas Aircraft Co., Inc., and was on the Herberts board of directors and executive council.

Robert E. Gross, director, is chairman of the board and president-treasurer of Lockheed Aircraft Corp., a director of Menasco Manufacturing Corp., and was a Herberts director.

Earl Melone, director, is a foreman and employe of Herberts Machinery Co.

Richard W. Millar, director, is vice president of Aviation Manufacturing Corp., and general manager of Vultee Division. He was a member of the board and on the executive council of Herberts.

Two more directors will be named, running the board membership to nine, and it is expected that R. J. Wig will succeed Melone or Cole, both of whom will resign from the board at such time as requested.

As of Oct. 10, 1938, the 10 largest stock holders of Herberts Engineering—all of whom will receive new stock—were:

Herberts Machinery Co., 5,700 shares, or 27.88% of the outstanding stock; Charles Leigh, 2,500 shares, or 12.23%; Aviation Manufacturing Corp., Downey, Cal., 2,500 shares, or 12.23%; LaMotte T. Cohn, 2,000 shares, or 9.78%; estate of Harry H. Wetzel, 1,500 shares, or 7.33%; T. M. Deal, 1,000 shares, or 4.89%; Walter V. Dobbs, 700 shares, or 3.42%; Carl Cover, 500 shares, or 2.44%; C. A. Collins, 500 shares, 2.44%; Charles S. Jones, 500 shares, 2.44%; Chester Upham, 500 shares, 2.44%; C. A. Herberts, 500 shares, 2.44%. Herberts received \$6,250 salary between Feb. 7 and Oct. 14, 1938.

Aircraft Components, Inc. was organized Sept. 17, 1938, under California charter and will acquire all assets, business and good will, and assume all known liabilities and obligations of Herberts Engineering Corp. Value of assets, business and good will was arbitrarily set at \$204,000. As of Aug. 31, stockholders' equity in Herberts Engineering was \$190,394.30.

"It will be necessary to increase... staff of engineers for the purpose of evolving improved and new types of hydraulic assemblies," the prospectus states. "Attention is called to the fact that the expenditures for... experimental work and designing of new models may result in substantial loss to the registrant..."

Most deliveries have been made by the predecessor company to Douglas Aircraft Co. for installation on military planes. From Apr. 15, 1938, to and including Sept. 29, 1938, total net sales to Douglas were \$27,080.80. Deliveries to Vultee and Lockheed totaled \$392.15. As of Sept. 29, 1938, total net selling price of all products ordered by Douglas but not yet invoiced was \$88,266.53; Lockheed, \$24,000; Mitsui & Co., Ltd., \$69,257.52.

Balance sheet of Herberts Engineering as of Aug. 31 showed assets of \$299,308.41; total current assets of \$76,241.86, of which cash amounted to \$15,960.92, accounts receivable, \$6,018.90, and inventories \$54,262.04. Property represented \$228,847, less \$8,220.88 for depreciation and amortization. Deferred charges were \$2,439.92. Current liabilities were \$108,914.11.

## Martin Quarter Net Is \$768,393; Continued Gains Seen for 1939, 1940

Announcing a net income of \$768,393.43 for the third quarter of 1938, Glenn L. Martin, president of the Glenn L. Martin Co., Baltimore, revealed that he expects the firm's business to increase during 1939 and 1940. Company employment is at an all-time high. Sales and net income for the 9-month period were also highest in company history, and on Oct. 1 the backlog totaled \$14,497,544.62.

"In the past," Mr. Martin said, "airplane manufacturers have been handicapped by lack of consistent volume and the consequent difficulty for any individual company to benefit from continuous production. Today, as for nearly three years past, continuous production is being maintained at our plant at Middle River at a rate which now enables us to take full advantage of the \$2,500,000 manufacturing expansion program we completed early this year in anticipation of increased and stabilized demand."

"Of our backlog of unfilled orders, totaling \$14,497,544.62, approximately 70% represents U. S. government orders, with 30% going to export. The contracts on our foreign business are so written that virtually no risk of cancellation or loss is entailed by war developments on other continents. As a result, our dollar volume of production for 1939 should be higher than for 1938 and we are practically assured continuing volume through 1940. Night shifts, which have been organized in several departments, bring the number of our employes,

A note for \$36,350, payable to F. W. Conant, representing 19 persons, including 16 stockholders, matures Feb. 15, 1939. On this list are Aviation Manufacturing Corp. (\$7,500), T. M. Deal (\$10,000), and Charles Leigh (\$7,500).

The predecessor owns about two acres of land and three principal buildings, the largest representing 36,500-sq. ft. Underwriters probably will be O'Melveny-Wagenseiler & Durst, of Los Angeles. The new company remains at 2929 Santa Fe Ave., Vernon, Cal., Los Angeles suburb.

### Manufacturer Incorporates

Arlington, Cal., Oct. 19—Lieut. Charles M. Fischer of Riverside, Army Air Corps officer stationed at March Field, has filed articles of incorporation for an aircraft manufacturing company which would establish a plant here. The light two-place monoplane Fischer has designed would be powered by a 75-hp. motor, built by his own company, and which would assure unusually high cruising speed and economical gas consumption. Gross weight would be 1,600-lbs., wing spread 32½-ft., and length would be 22¾-ft. It is said a hangar will be erected at the local airport, where space has already been leased for the factory.

### Seek Pittsburgh Listing

The Securities & Exchange Commission will hold a hearing Nov. 8 in Washington on applications of Pittsburgh Stock Exchange for unlisted trading privileges in securities of 34 firms. Aviation companies represented are: Aviation Corp. \$3 capital stock; Boeing Airplane Co., \$5 capital stock; Transcontinental & Western Air, Inc., \$5 common stock; United Aircraft Corp., \$5 capital stock; United Air Lines Transport Corp., \$5 capital stock.

## Breeze Reports Net Income of \$84,003; Files Cross Suit

Breeze Corporations, Inc., reports a consolidated net profit of \$84,003.93 for the six months ending June 30, 1938, prior to provision for federal income taxes. Gross sales, less discounts, returns and allowances were \$1,521,990.79 for the parent and Federal Laboratories, Inc., and Essex Tool & Die Co., Inc. Cost of goods sold exclusive of depreciation and taxes was \$1,068,650.88. Other income was \$15,324.49. Sales for the ninth months ending Sept. 30, 1938, were \$2,200,065.42 for parent and subsidiaries.

Total assets were \$1,922,379.43, on June 30 of which current assets represented \$1,524,386.03. Cash on hand and in banks June 30 was \$252,661.37, and cash in restricted account totaled \$18,000. Notes receivable, \$11,615.30. Accounts receivable—customers included \$186,917.37 current from U. S. government, and \$120,552.99 retained percentage from U. S. government; other customers, \$205,065.14. Inventories: materials, unfinished goods and finished goods, \$637,237.08; contract in process at accumulated cost, less estimated cost of portion of contract billed, \$108,458.61.

Fixed assets less reserve for depreciation were \$273,479.63. Intangibles were \$71,025.62, less \$35,189.23 for amortization.

Total current liabilities were \$374,433.05. A reserve of \$80,589.51 for federal income taxes includes taxes of prior years in dispute but not provision for 1938 taxes. Minority interest was \$842.35. Capital stock of 318,200 shares at \$1 par value common was outstanding. Authorized capitalization is 1,000,000 shares. Capital surplus was \$994,855.11 and earned surplus \$153,459.41.

A cross suit involving \$250,000 (AMERICAN AVIATION Oct. 15), by Breeze Corp. Inc., against four brokerage houses, eight brokers and 31 stockholders who are charged with conspiracy to gain control of the business, has been filed in the U. S. District Court, Philadelphia.

Joseph J. Mascuch, president, charges: that false reports of the company's financial condition were circulated, that accusations of mismanagement were made against certain officers, and that defendants applied for a receiver in the New Jersey courts recently.

Breeze's answer to a suit begun by Eugene L. Garey, New York attorney who asked \$22,665.00 for professional services, was that such service was rendered "in furtherance of a conspiracy" on the part of Garey, Clarence K. Pistell, John J. Bergen, and Thomas B. Wright, together with others, with the object the "illegal unseating of the present management and to obtain control of Breeze Corporations, Inc." A chancery suit was filed in Newark Sept. 12 by a group of stockholders seeking to wrest management from Joseph J. Mascuch, president, and other officers and directors.

"We absolutely deny the charges made in the (stockholders') suit and we are defending the action, and will continue to do with the utmost vigor," Mr. Mascuch declared.

On Sept. 28 Breeze officials were: Joseph J. Mascuch, president, general manager, and director; John T. Mascuch, secretary and director; Joseph F. Lucas, vice president, sales manager, and director; John W. Young, vice president and director; M. Merwin Eels, vice president.

Victor M. Woodward, recent graduate of Roosevelt Aviation School, has joined the staff of aeronautical Radio Co., Roosevelt Field.



## Douglas, Reporting New Profit Peak, Declares \$3 Dividend, Raises Wages

Net Income for Nine Months Ending Aug. 31 Is \$1,821,964, Equal to \$3.19 a Share; Increase in Workers' Pay Retroactive to Oct. 1

Douglas Aircraft Co., Inc., on Oct. 21 released a financial statement for nine months showing a higher income than any preceding full year, announced a voluntary blanket wage increase affecting 5,500 employees, and declared a dividend of \$3, payable Nov. 24.

Net profit for the nine months ending Aug. 31 was \$1,821,964, or \$3.19 a share, as compared with \$852,795, or \$1.49 a share, in the like period of last year. In the entire year of 1937, net profit was equal to \$1.90 a share.

Net current assets total \$8,553,651 (Aug. 31) as compared with \$6,763,670 a year before. Backlog was \$25,638,330, comparing with \$26,545,652 three months earlier and with \$34,800,000 on Aug. 31, 1937. Sales in the third quarter were \$6,256,596; in the second quarter \$9,991,335; in the third quarter of 1937 they were \$6,781,306. Net profit in the third quarter was \$728,815 (\$1.28 a share). Net income in the second quarter was \$686,378 (\$1.20 a share), and in the August period of last year \$326,973 (57c a share). The last figure is after an accrual for undistributed profits surtax. The improved condition in the last quarter reflected larger profit margin on the craft delivered this summer.

Net sales were: for the first nine months of the fiscal year, \$22,899,838, comparing with \$15,276,504 in the same period of 1937. Company reports delivery of 353 planes and spare parts for the nine months as compared with 224 in the comparable period of 1937. Commercial planes delivered numbered 47, comparing with 85 last year at this time.

Discussing the 2½% wage increase, which will cost about \$300,000 more a year, Donald W. Douglas, president, stated: "Ability of the company to grant this voluntary increase is concrete evidence that continuous friendly relations between management and employees assure greater returns to both and that only through industrial harmony and cooperation can capital and labor gain efficiency and prosperity."

The increase was declared retroactive to Oct. 1, adding a month's increase to each pay check.

The size of the dividend declaration was influenced by the fact that the company is still subject to the undistributed profits surtax since the fiscal year ends Nov. 30. The last dividend was declared in September, 1935, when 75¢ was paid; a 1937 declaration was

### Vultee Gets Brazil Order

Los Angeles, Oct. 15—Vultee Aircraft Division of Aviation Manufacturing Corp. has delivered five of 26 V11-GB2's for the Brazilian Air Corps, and is also at work on seven YA-19 attack ships for the Army Air Corps. More than 700 men are employed and backlog on Oct. 1 was about \$1,252,349. The company recently added 3600-sq. ft. of floor space in a new structure to store raw stock. Nine months deliveries ending Aug. 31 were \$4,070,935. Exports for August were \$274,725.

### Summerill Report

Summerill Tubing Company, Bridgeport, Pa., has issued a report on the physical properties of chromium nickel molybdenum (S.A.E. 4340) steel tube prepared by Dr. W. M. Murray of the Massachusetts Institute of Technology. Copies may be obtained by writing to J. P. Dods, general sales manager.

### Douglas V. P.'s Named

Los Angeles, Oct. 24—Douglas Aircraft Co., Inc., announces that Maj. Victor E. Bertrands, general manager of the El Segundo Division (formerly Northrop) and Edmond R. Doak, in charge of export sales, have been elected company vice presidents.

## N. American Dividend; Net Profit \$1,014,491

North American Aviation, Inc., on Oct. 15 declared a dividend of 40¢ a share, payable Dec. 1, and reported a consolidated net profit of \$1,014,491 after costs and depreciation for the nine months ending Sept. 30, 1938, and exclusive of \$854,469 in excess of book values received from sale of air transport division and its investment in stock of Montreal Aircraft Industries, Ltd., which was transferred to capital surplus. Net profit for the period was \$227,055 after federal income taxes and after depreciation charges of \$528,723. An initial dividend of 12½¢ was declared last December.

J. H. Kindelberger, president, said in announcing the dividend, "This action reflects the progress of the company since establishment of its manufacturing operations in Los Angeles in the early part of 1936. Through an aggressive research and development program, the company in a little over two years has grown to be one of the largest and most successful aircraft manufacturing concerns in the country, giving employment to over 3,000 employees in the new factory with a monthly payroll of approximately \$350,000." Mr. Kindelberger sailed in late October for England in connection with the British government's order for 200 planes. Backlog on Sept. 30 was reported to be \$14,805,173, and deliveries in the first nine months, were about \$6,000,000.

### 120 Planes in 2 Months

Los Angeles, Oct. 15—North American Aviation, Inc., delivered 60 planes in September, the same high production as in August, the Los Angeles County Board of Supervisors announced today. This is believed to be the largest number of craft manufactured in one month by any heavy-plane firm in this country since the war.

### Ex-Cell-O Net \$143,443

Net income of \$143,443 is announced by Ex-Cell-O Corp., for the three months ending Sept. 30, after provision for charges, depreciation and federal income taxes. This is equivalent to 36¢ a share on 393,345 shares of \$3 par value capital stock. In the third quarter of 1937 net profit was \$196,157, or 51¢ a share on 386,848 shares. For the June, 1938 quarter, net income was \$26,186 or 7¢ a share. For the nine months ending Sept. 30, 1938, net income was \$301,693, or 76¢ a share, comparing with \$480,205 or \$1.24 a share for the nine months ending Sept. 30, 1937.

## MENASCO LOSS IS SET AT \$95,044

Bookkeeping Adjustments During Process of Reorganization Run Figure Up; Big Business Gain Since June

A net loss of \$95,044.72 was announced Oct. 20 by Menasco Manufacturing Co., Los Angeles, for the year ending June 30. Gardner W. Carr, president, revealed that from June 30 to Oct. 20 the company's backlog increased from \$11,967.36 to \$400,000, which exceeds total gross sales for the preceding three years. A substantial portion of the loss was attributed to adjustments of inventory occasioned by a change in method of pricing, variance in physical quantities on hand, and writing off obsolete items.

Mr. Carr, who became president on June 8, told stockholders: "When the present management assumed responsibility for operation of the company, a thorough survey was made of the market possibilities for its engines. This indicated that while the company has available engines to meet the demands in the low and medium horsepower fields, considerable development work would have to be carried forward to make the company a dominating factor in the airplane engine field as a whole. . . . It was deemed advisable to seek additional uses for the company's plant. In this direction we have met with gratifying success. We have been doing precision machine work for Douglas, North American and Lockheed Aircraft."

"During July we completed negotiations with the Northill Co. for manufacture of 1,000 small diesel engines of 15-20 hp., the first of which will be delivered in November. During the last year a special development program was carried forward for a reputable airplane manufacturer. Results have been mutually satisfactory and a new type of aircraft [Vega, Unitwin powered plane] designed around Menasco engines is now being offered for sale and is creating international interest with definite orders already signed. . . . As additional funds become available, it is the intention to develop engines of greater horse power."

More than \$50,000 has been paid out in old accounts since last spring.

Assets as of June 30 were \$558,689.04, of which current assets were \$198,189.45. Cash was \$44,299.08; accounts receivable, less reserve for doubtful accounts, \$18,801.72; inventories, \$135,088.65. Fixed assets included land, \$25,011.48; buildings, \$48,997.58; machinery and equipment, \$215,054.22; patterns & tracings, \$20,947.78; furniture and fixtures, \$9,721.36; automobiles, \$1,970.26; less depreciation reserves of \$69,229.76. Unamortized development expense, \$97,168.38; Deferred charges, \$10,858.29.

Current liabilities totaled \$125,183.24.

Listed are: \$78,832.48 (\$75,000 secured by trust deed on land and buildings and chattel mortgage on machinery and equipment); accounts payable, \$34,738.25; contracts payable, \$3,387.91; purchase obligation, portion due within one year, \$3,000; accrued salaries and wages, \$2,725.94; accrued taxes, \$2,020.93; other accrued liabilities, \$477.73.

Purchase obligations, less portion due within one year included in current liabilities, totaled \$19,296.77. Capital stock, 375,962 shares outstanding out of an authorized 500,000 shares (\$1 par value), \$375,962. Earned surplus, \$38,247.03 (red).

Net sales for the year were \$176,289.80; cost of sales, (exclusive of depreciation and amortization), \$177,079.00; selling, administrative and general expenses, \$46,664.39. Deficit on June 30 was \$121,651.91.

omitted to build up working capital.

Parent and subsidiaries for the nine months to Sept. 1 report consolidated net profit of \$1,821,964 after charges, or \$3.19 a share on 570,683 shares of capital stock; comparing with \$852,795 or \$1.49 a share for the similar period of 1937. In the last quarter indicated net profit (based on a comparison of company reports for the six and nine months periods) was \$728,815, equal to \$1.28 a share; comparing with \$326,973 or 57c a share in the similar quarter of 1937, and \$686,378 or \$1.20 a share in the quarter ended May 31, 1938.

Current assets on Aug. 31, 1938 were \$10,726,228 and current liabilities were \$2,172,577; comparing with \$14,467,789 and \$7,950,030, respectively, on Aug. 31, 1937. Cash totaled \$3,793,966 on Aug. 31, 1938.

Income is shown as follows for the nine months ending Aug. 31 of 1938 and 1937:

	1938	1937
Net sales .....	\$22,899,839	\$15,276,503
Cost, expenses ..	20,285,172	14,012,028
Operating profit ..	\$2,614,667	\$1,264,475
Other income ..	218,750	49,006
Total income ..	\$2,833,417	\$1,313,481
Other income ..		
Fed. Income taxes, etc. ..	646,169*	114,121
Profit .....	\$1,821,964	\$823,060
Adj. minority interest .....		29,735
Net Profit ..	\$1,821,964	\$852,795

\* Writeoffs included of proportionate amount spent on DC4.

Consolidated balance sheet shows total assets of \$15,426,213 as compared with \$19,158,853 on Aug. 31, 1937. Capital surplus was \$3,783,131 and earned surplus was \$4,817,661 against capital surplus of \$3,783,270 and earned surplus of \$2,907,803 on Aug. 31, 1937. Cash amounted to \$3,793,966 as compared with \$1,394,791 a year earlier.

## Thompson Products Net for Quarter, \$165,454

Thompson Products, Inc., and subsidiaries report a net profit for the quarter ending Sept. 30 of \$165,454, after depreciation and federal income taxes, but subject to year end adjustments. This is equal, after dividend requirements on \$5 preferred stock, to 53¢ a share on the 293,290 no-par shares of common. Net profit in the corresponding period of 1937 was \$135,577. For the 9 months ending Sept. 30, 1938, net profit was \$277,552, or 83¢ a common share, comparing with \$879,581 in the first 9 months of 1937.

Current assets (consolidated) as of Sept. 30, 1938, were \$4,872,624, including \$386,605 cash. Current liabilities were \$1,970,647, including \$950,000 in bank notes payable. Inventories were \$2,864,531. Total assets were \$8,975,272, as compared with \$9,376,693 a year ago. Capital surplus was \$333,143 and earned surplus was \$2,759,555.



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## Stock Holdings

Following is official summary of transactions and holdings of officers, directors and principal stockholders of corporations with equity securities registered, filed with the Securities & Exchange Commission Sept. 11-30. Unless otherwise indicated, transactions were made in August and holdings are as of the end of that month:

**Pan American Airways Corp.**—Graham B. Grosvenor, director, decreased 200 common to 1,100. Robert G. Thach, officer, decreased 500 common to 5,926.

**Western Air Express**—Thomas Wolfe, officer and director, acquired 975 common in May, 1938, through exercise of rights, and acquired 375 in July, holding 1,550.

Following is tabulation of equity holdings filed by persons becoming officers, directors, or principal stockholders of issuers having any securities registered:

**Aviation Corp., common:**  
R. S. Pruitt, officer—1,000 July, 1938  
**Menasco Mfg. Co.:**  
P. C. Munkholm, officer—none Sept., 1938.

## Contracts

The Department of Labor announced the following contracts, amounting to \$970,728.52, signed during the week ended Oct. 8 by various government agencies:

**Aluminum Co. of America, Washington, D. C.**, aluminum bronze, Army Air Corps, \$14,080.00.

**Shell Union Oil Corp., New York City**, engine fuel, Army Air Corps, \$54,600.00.  
**Grueman Aircraft Engineering Corp., Bethpage, L. I., N. Y.**, airplanes, Navy, \$754,400.00.

**Kollsman Instrument Co., Inc., Elmhurst, N. Y.**, altimeter assemblies, Army Air Corps, \$135,850.00.

**Douglas Aircraft Co., Inc., Santa Monica, Calif.**, airplane parts, Navy, \$11,798.52.

The Department of Labor announced the following contracts, amounting to \$379,674.27, signed during the week ended Oct. 15 by various government agencies:

**Rosslyn Steel & Cement Co., Washington, D. C.**, steel frame buildings, Civil Aeronautics Authority, \$38,567.83.  
**Goodyear-Zeppelin Corp., Akron, Ohio**, fins and elevators, Navy, \$11,625.00.

**Wright Aeronautical Corp., Paterson, N. J.**, castings, Philadelphia Navy Yard, \$15,320.58.

**United Aircraft Corp., Pratt & Whitney Aircraft Div., E. Hartford, Conn.**, aircraft bearings, Philadelphia Navy Yard, \$10,187.18.

**United Aircraft Corp., Pratt & Whitney Aircraft Div., E. Hartford, Conn.**, aircraft bearings, Philadelphia Navy Yard, \$10,582.65.

**United Aircraft Corp., Pratt & Whitney Aircraft Div., E. Hartford, Conn.**, engine parts, Philadelphia Navy Yard, \$83,674.34.

**United Aircraft Corp., Pratt & Whitney Aircraft Div., E. Hartford, Conn.**, engine parts, Philadelphia Navy Yard, \$16,540.60.

**Wright Aeronautical Corp., Paterson, N. J.**, engine parts, Ordnance, \$151,550.42.

**Wright Aeronautical Corp., Paterson, N. J.**, engine parts, Philadelphia Navy Yard, \$16,260.67.

**Pump Engineering Service Corp., Cleveland, Ohio**, pump assemblies, Army Air Corps, \$25,365.00.

## Physicians Listed

The Civil Aeronautics Authority recently announced that Dr. Ward C. Zeller, 206 Bank of America Bldg., Visalia, Cal., has been appointed medical examiner. Announcement was also made of the following new addresses for physicians:

**Tuscaloosa, Alabama**—Dr. James H. Goode, 1424 University Ave.  
**New London, Conn.**—Dr. Philip J. Savage, 86 State St.  
**Indianapolis, Ind.**—Dr. Wilbur F. Smith, 1818 College Ave.  
**Harleton, Pa.**—Dr. William V. Coyle, 506 Traders Bank Bldg.  
**Winchester, Va.**—Dr. George G. Snarr, 27 West Boscolvan St.

## Bendix Net for 3 Mos., \$89,794

In a report for the quarter ending Sept. 30, Bendix Aviation Corp. and subsidiaries show net profit of \$89,794 after depreciation, interest, federal income taxes, equal to 4¢ a share on 2,097,663 shares of capital stock, comparing with \$279,207 or 13¢ a share in the corresponding quarter of 1937. For the nine months ending Sept. 30, net loss was \$406,205, comparing with a net profit of \$1,911,168 (91¢ a share) in the first nine months of 1937. For the 12 months ending Sept. 30, net loss was \$62,240. This compares with a net profit of \$2,799,789 or \$1.33 a share for the 12 months ended Sept. 30, 1937.

For the quarter ending Sept. 30, 1938, consolidated income compares as follows:

	1938	1937
Operat. profit ..	\$481,860	\$646,631
Depreciation .....	269,399	260,505
Interest .....	60,898	4,090
Federal taxes ....	61,769	102,829

Net profit .... \$89,794 \$279,207  
For the nine months ending Sept. 30, 1938:

Operat. profit ..	\$686,459	\$3,130,480
Depreciation .....	810,623	765,553
Interest .....	99,078	8,403
Federal taxes ....	162,963	445,356

Net profit .... \$406,205 \$1,911,168  
For the 12 months ending Sept. 30, 1938:

Operat. profit ..	\$1,509,914	\$4,454,910
Depreciation .....	1,049,381	1,024,405
Interest .....	109,963	13,298
Federal taxes ....	412,810	617,418

Net loss .... \$62,240 \$2,799,789

\* Loss.

## 490 Planes From L. A.

Los Angeles, Oct. 15—The Los Angeles County Board of Supervisors today reported that 25% of the airplanes built in the U. S. during the first six months of 1938 were produced in this area, or 490 units out of 1,974.

## Incorporations

**New York—Solo Flyers of America, Inc.**, aircraft, filed by King, Friedman & King, 799 Flushing Ave., Brooklyn; \$20,000 capitalization.

**New York—Stinson School of Aviation, Inc., Queens.** To conduct aviation school, teach designing, operating and mechanics, manufacturing, and to deal in aircraft. Bertram E. Driscoll, 45 Beaver St., New York City; 200 shares no par value.

**California—Dale Aircraft Co., Inc., Los Angeles.** To manufacture airplanes. Directors: George M. Frohlich, Harold E. Dale, Roland J. Brownberger. Capital, 7,500 shares, no par value. Permitted to issue all.

**California—Union Airplane Co., Los Angeles.** To manufacture airplanes and airplane parts. Directors: W. K. Gawley, Keith Rider, and C. S. Story. Capital, 500 shares, no par value. Permitted to issue 300 shares.

**New York—Trans-America Aircraft & Motor Corp., Buffalo.** with \$100,000 capital stock. Incorporators: Richard Benson, John Oimsted, Jr., and Charles A. Balton, all of Buffalo.

**North Carolina—Charlotte Flying Club, Inc., principal office, Charlotte.** To maintain a clubhouse or club rooms as a meeting place for its members. A non-stock corporation. Incorporators are T. L. McAllister, F. W. Eaton, and E. C. Black, of Charlotte.

**New York—Deer Island Lighterage Corp., New York.** aircraft, Martin J. Lyons, Jr., 332 East 149th St., Bronx; 200 shares, no par value.

**Washington—Port Angeles Flying Club, Inc., Fort Angeles.** Milton Ruberg, Max Borst, and Harry Stockinger.

## Dissolutions

**Pennsylvania—Eastern Air Transport, Inc.**, has petitioned for a decree of dissolution. Hearing will be Nov. 10 before Judge Paul N. Schaeffer. Company, which was originally chartered as Reading Airways to manufacture, buy and sell airplanes and accessories, has not operated since October, 1929, it is alleged, and shareholders have agreed to dissolution.

## AVIATION STOCK TRENDS

### WEEKLY AVIATION AVERAGES (1937-1938)

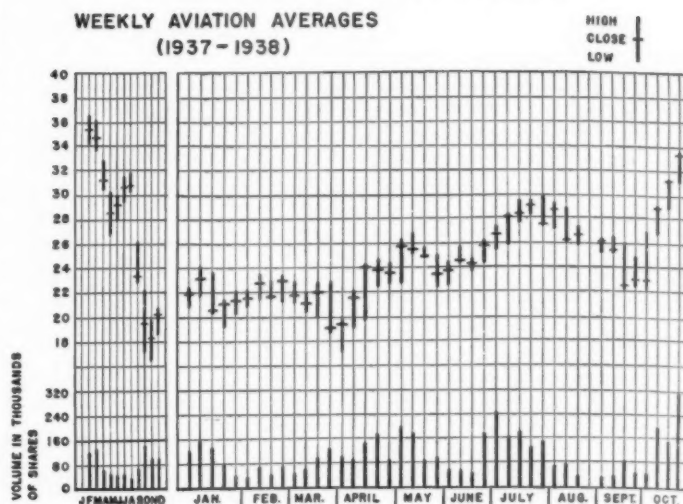


Chart Data Supplied by Wyckoff Associates, Inc.,  
Comments by Philip P. Friedlander

Suddenly and without a visible change in the good business news, the aviation stocks assumed a real position of leadership in the market, and blazed a trail for other securities to follow into new high ground. The explanation lies in human psychology.

There is no strange hand guiding and manipulating prices. It is merely that, almost in unison, the financial community has discovered a group of securities that should make a great deal of money in the future. But just how much present prices have discounted this is the problem facing us now.

Does this spell caution? Look at the last week's volume line printed above. Notice how far up this has gone, indicating that pretty close in here there will be a climactic buying wave. Then, too, notice how sharply

the move up has been since the averages broke through 30. Up until several weeks ago this 28-30 level seemed to be an area hard to penetrate. From the low of approximately 22.03, which occurred during the week of October 1st there has been a 14 point move up, and this without a definite reaction. Buying probably will continue, and when the old highs of 1937 around 37 are reached or neared, buying will probably be exhausted. All who wanted aviation stocks will be amply supplied. Then the next obvious thing will happen—a sharp correction, with the general public not understanding.

We do not advise buying aviation stocks here. The move is too near to completion. We would watch carefully and just a little higher up liquidate and await a more advantageous level.

## NEW YORK CURB EXCHANGE

	Week Ending Oct. 15				Week Ending Oct. 22			
	High	Low	Net Change	Sales	High	Low	Net Change	Sales
Aero Supply A .....	3 1/4	3 1/4	+ 3/8	2,000	4	3 3/4	+ 1/8	8,300
Aero Supply B .....	8 1/4	7 5/8	+ 1/4	300	9 1/2	8 1/4	.....	500
Air Associates .....	14 1/2	14 1/4	+ 1/4	800	17	14 1/2	+ 2 1/2	5,000
American Airlines .....	2 1/2	2 1/4	+ 1/4	11,600	2 3/4	2	+ 3/4	28,800
Aviation & Transp. ..	2 1/2	2	.....	500	2 3/4	2 1/4	+ 3/4	2,000
Beech Aircraft .....	15 1/2	13 1/4	+ 1 1/2	4,500	17 1/4	16 1/4	+ 2 1/4	13,000
Bell Aircraft .....	6 1/4	5 1/2	+ 3/4	2,400	7 3/4	6 1/4	+ 3/4	12,300
Bellanca Aircraft .....	4 1/4	4	.....	800	5	3 3/4	+ 1	3,200
Brewster Aero. ....	6 1/2	6	+ 1/2	9,500	7 1/4	6 1/4	+ 1	20,600
Fairchild Aviation ..	5 1/2	5	+ 1/2	2,600	6	5 1/4	+ 3/4	7,500
Grueman Air. Eng. ....	15	12 1/2	+ 1 1/2	20,600	18	15	+ 1 1/2	22,300
Irving Air Chute .....	14 1/2	13	+ 1 1/2	2,400	15 1/4	14 1/4	+ 1	2,000
Lockheed Aircraft ....	18 1/2	15 1/4	+ 3 3/4	50,600	20 1/4	18 1/2	+ 1	72,700
Pan American Airways ..	15 1/2	14 1/4	+ 1/2	2,600	15 1/4	14	+ 1/4	3,900
Penn Central Airlines ..	7 1/2	7 1/4	+ 1/4	800	8 3/4	7 5/8	+ 5/8	3,900
Seversky Aircraft ....	2 3/4	2 1/2	+ 3/4	2,000	3 1/2	2 7/8	+ 1/2	20,500
United Aircraft war ..	15 1/2	12 5/8	+ 2 1/2	20,300	19	15 1/2	+ 2 1/2	26,100
Waco Aircraft .....	.....	.....	.....	.....	3 1/4	2 1/2	+ 3/4	800
Western Air Express ..	3 1/4	3 1/4	.....	900	3 3/4	3 1/4	+ 5/8	2,900

## NEW YORK STOCK EXCHANGE

	Week Ending Oct. 15				Week Ending Oct. 22			
	High	Low	Net Change	Sales	High	Low	Net Change	Sales
Aviation Corp. ....	4 3/4	4 1/4	+ 1/2	18,000	6	4 7/8	+ 1	72,800
Bendix Aviation .....	22 1/2	21 1/8	.....	24,900	25 3/4	21 5/8	+ 2 1/4	134,300
Boeing Airplane .....	28 3/4	26	+ 2	30,200	30 1/4	27	.....	63,300
Consolidated Aircraft ..	17 3/4	15 3/4	+ 1 3/4	16,300	18 3/4	16 3/4	+ 1/2	31,600
Curtiss-Wright .....	6	5 5/8	+ 5/8	78,800	7	6	+ 1	349,100
Curtiss-Wright A .....	26	24	+ 1 1/4	40,400	26 3/4	25 1/4	+ 1 1/4	49,000
Douglas Aircraft .....	56 3/4	50 3/4	+ 5 3/4	27,000	61 1/2	56	+ 4 3/4	67,600
Ex-Cell-O .....	17 1/2	15 3/4	+ 1 1/2	6,000	19 3/4	17	+ 2 3/4	116,800
Glenn L. Martin .....	29	24 1/4	+ 4	52,500	31	28 3/4	+ 2 1/4	31,600
Natl. Aviation Corp. ....	10 1/4	8 1/2	+ 1 1/2	15,900	11 3/4	10 1/4	+ 1 1/4	193,900
N. American Aviation ..	11 1/4	9 1/4	+ 1 1/2	43,200	14 1/2	12 1/2	+ 3 1/2	75,200
Sperry Corp. ....	34 1/4	29 1/4	+ 4 3/4	74,500	35 3/4	32 1/2	+ 3 1/4	16,100
Thompson Products .....	19 1/4	18 1/2	.....	3,100	24 1/4	19 1/4	+ 4 3/4	66,300
TWA .....	8 3/4	7 3/4	+ 3/4	8,100	10 3/4	8 1/4	+ 2 1/4	129,400
United Aircraft .....	32 3/4	30	+ 1 3/4	83,300	35 1/4	32 3/4	+ 2 3/4	77,800
United Air Lines .....	10 3/4	9 3/4	+ 1/4	21,300	11 3/4	10	+ 1 3/4	950
Wright Aeronautical ..	112	102 1/2	+ 7 1/2	680	115	107	+ 1 1/2	.....



## Aero Patents

Oct. 11, 1938

- 2,133,043: Aeroplane. Issued to Walter W. Rothenhoefer, St. Louis, Mo.  
 2,132,599: Landing Means for Aircraft. Issued to Karl Baumann, Basel, and Armin Ettinger, Birsfelden, near Basel, Switzerland.  
 2,133,253: Spinner-Cowling. Issued to George Francis Myers, New York, N. Y.  
 2,133,025: De-Icer for Aeroplanes and the Like. Issued to Julian F. Hamil, Temple, Tex.  
 2,132,740: Aircraft Compass. Issued to Carlus E. Kunze, Jamaica, N. Y., and Theodore L. Soo-Hoo, Quincy, Mass.  
 2,133,168: Resilient Control Means. Issued to Joseph M. Gwinn, Jr., Buffalo, N. Y.  
 2,132,677: Automatic Steering Means. Issued to Britton Chance, Mantoloking, N. J.  
 2,132,481: Propeller Drive for Coaxial Oppositely Rotating Propellers. Issued to Alexander H. King, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware.  
 2,132,407: Pitchometer. Issued to Thomas P. Fowler, Pittsburgh, Penna.  
 111,714: Design for an Airplane Landing Wheel Position Indicator. Issued to Charles Hilaire Henri Rodanet, Neuilly-sur-Seine, France, assignor to Societe Anonyme, Jager-Aviation, Levallois-Perret, Seine, France.  
 2,132,578: Illuminating Means for Indicating Instruments. Issued to Vladimir A. Reichel, Bellerose, N. Y., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware.  
 2,132,529: Airplane Construction. Issued to William B. Firner, Detroit, Mich. Continuation of application Serial No. 561,219, Sept. 4, 1931.  
 2,132,682: Tail Wheel and the Like for Aircraft. Issued to George Herbert Dowty, Cheltenham, England.  
 2,132,908: Parachute Training Device. Issued to James H. Strong, Trenton, N. J.  
 2,132,676: Automatic Steering Means. Issued to Britton Chance, Mantoloking, N. J.  
 2,132,605: Cylinder Head. Issued to Roland Chilton, Ridgewood, N. J., assignor, by mesne assignments, to Wright Aeronautical Corporation, Paterson, N. J., a corporation of New York.

Oct. 18, 1938

- 2,133,285: Radio System for Automatic Control of Aircraft As During Landing. Issued to Francis W. Dunmore, Washington, D. C., assignor to the Government of the United States of America, as represented by the Secretary of Commerce.  
 2,133,283: Aircraft. Issued to Alessandro Dandini, San Francisco, Calif.  
 20,891: Control Flap and Balance. Issued to Leslie R. Tower, Seattle, Wash., assignor to Boeing Aircraft Co., Seattle, Wash., a corporation of Washington.  
 2,133,511: Direct Current Relay. Issued to Ralph M. Heintz, Palo Alto, Calif., assignor, by mesne assignments, to Bendix Aviation Corp., South Bend, Ind., a corporation of Delaware.  
 2,133,793: Gyrovertical. Issued to William Anscott, Woodhaven, N. Y., and Leslie F. Carter, Leonia, N. J., assignors to Sperry Gyroscope Co., Inc., Brooklyn, N. Y., a corporation of New York.  
 2,133,809: Gyrovertical. Issued to Leslie F. Carter, Leonia, N. J., and William Anscott, Woodhaven, N. Y., assignors to Sperry Gyroscope Co., Inc., Brooklyn, N. Y., a corporation of New York.  
 2,133,668: Wing for Aircraft. Issued to Henry Charles Alexandre Potez, Meunite, France.  
 2,133,489: Gyroscope. Issued to Wesley L. Smith, Cranford, N. J., assignor to Eclipse Aviation Corp., East Orange, N. J., a corporation of New Jersey.  
 2,133,853: Propeller. Issued to Gustav Felge, Des Moines, Iowa.  
 2,133,721: Airplane Terminal. Issued to Solomon H. Seidman, Bronx, N. Y.  
 2,133,656: One-Way Drive for Propellers. Issued to Frank W. Caldwell, Hartford, Conn., assignor to United Aircraft Corp., E. Hartford, Conn., a corporation of Delaware.

Los Angeles, Oct. 15—Aircraft exceeded in value all other classifications of exports from Los Angeles harbor in September, accounting for more than \$1,000,000 of the total valuation of \$10,500,000.

1700-Lb. Monoplane  
Has 2 50-HP. Engines

San Francisco, Oct. 17—A low wing monoplane with a 38-ft. wing span, retractable landing gear, and a gross weight of 1,700-lbs., powered by two 50-hp. Continental motors, is undergoing test flights at municipal field. The craft, with the lines of a transport, was designed and built by Sterling Edwards, flying enthusiast, who is president of the E. H. Edwards Co., manufacturers of wire rope, at whose plant construction was carried on.

"I didn't see why a small plane with the tremendously increased safety factor of two motors wouldn't be possible," Edwards said, "so we built one to test that theory. If our performance tests are satisfactory I see no reason why such a ship couldn't be built to sell for less than \$5,000."

Michael Casserly is test pilot. A speed of 120-mph. is claimed for the ship, which is 27-ft. long.

CAA Changes Rating  
of 1300-1500 Lb. Ships

The Civil Aeronautics Authority on Oct. 20 announced that regulations covering Class 1, Class 2-S (single-engine) and/or Class 2-M (Multi-engine) aircraft under section 20.55 of the Civil Air Regulations, had been changed so that planes in the 1300-1500 lb. gross weight classification, heretofore grouped in Class 1, are now included in Class 2-S or 2-M, covering aircraft up to 4,000 lbs. gross weight.

Changes were made so that aircraft just under the 1500-lb. gross weight mark, but having flight characteristics and sufficient horsepower to qualify for the higher ratings, could be included therein. Pilots holding a Class 1 rating only, who were flying aircraft over 1300 lbs., will be required to have their ratings changed. Pilots formerly qualified to fly aircraft in the 1500-4000 lb. class are automatically qualified to fly planes in the 1300-4000 lb. gross weight class.

## New Bellanca Order

Wilmington, Del., Oct. 20—Bellanca Aircraft Corp. is building a 15-passenger \$55,000 seaplane for the British Yukon Navigation Co., which operates from Whitehorse, Y. T., Canada, into the Northwest Territory. It is a single-engined job and may be equipped with skis for winter operation. Without seats the plane will carry a two-ton cargo. Two similar planes were built for Mackenzie Air Service of Edmonton.

## Bellancas for Brazil

Wilmington, Del., Oct. 15—Bellanca Aircraft Corp., New Castle, will start next week on construction of two planes for the Brazilian government at a cost of about \$60,000. They will be completed about Jan. 1. Officials said the craft will be used for photographic work.

## Lenert Considers Toledo

Toledo, O., Oct. 15—Lenert Aircraft Co., Wauseon, O., may establish a plant here, according to W. Lenert, president. A meeting with local parts manufacturers is scheduled soon.

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